ESTABLISHED IN 1872

PAPER TRADE JOURNAL

PAPER

SIXTY-FOURTH YEAR

PAPER

Established Feb. 17, 1899
Consolidated Nov. 16, 1899
with PAPER TRADE JOURNAL.

Vol. CI, No. 7 Thursday, August 15, 1935

Established Sept. 21, 1910
Consolidated Feb. 19, 1925
with PAPER TRADE JOURNAL.

I. P. & P. Co. Reduces Net Loss in First Quarter

Reports Net Loss for the Quarter Ending March 31, 1935 of $1,068,996 as Against Loss of $1,216,543 for the Same Period in 1934—Gross Sales for First Three Months Were $22,487,148 as Against $20,863,457 in the First Quarter of 1934—Consolidated Funded Debt Showed Further Reduction of $775,378

Archibald R. Graustein, president, in submitting his report for the quarter ending March 31, 1935, says:

"Submitted herewith is summary of consolidated profit and loss of International Paper and Power Company and subsidiary companies (excluding International Hydro-Electric System and its subsidiaries) for the three months ending March 31, 1935, together with comparative figures for the corresponding period in 1934. These figures are on the new basis first adopted in the annual report for 1934 and are not comparable with statements previously issued.

Newsprint Tonnage Declined 10 Per Cent

"Newsprint tonnage declined 10 per cent as compared to the first quarter of 1934, reflecting the reduction by newspaper publishers of their excess stocks accumulated in November and December. As a result of improvement in other grades, however, total deliveries by the Company of all pulp and paper in the first quarter this year were slightly above the corresponding period last year.

"Due partly to this greater volume, partly to slightly higher average prices realized for pulp and paper and partly to higher revenue from sale of other products there was an increase of $1,623,691 in gross sales as compared to the first quarter last year. This was largely offset by higher costs and expenses but the net loss for the period after all charges was reduced to $1,068,996 in 1935 compared to $1,218,543 in 1934.

Funded Debt Showed Further Reduction

"During the first quarter of 1935 consolidated funded debt showed a further reduction of $775,378. There was relatively little change from the December 31, 1934, position in consolidated notes payable or in consolidated net working capital."

INTERNATIONAL PAPER AND POWER COMPANY
AND SUBSIDIARY COMPANIES
(Excluding International Hydro-Electric System and Subsidiaries)
Summary of Consolidated Profit and Loss
For Three Months Ended March 31, 1935 and 1934

	Three Months Ended March 31, 1935	Three Months Ended March 31, 1934
SALES AND OTHER INCOME:		
Gross sales, less returns, allowances and discounts	$22,487,148.28	$20,863,457.04
Other income—net	288,024.08	
	$22,775,172.36	
COST AND EXPENSES:		
Cost of sales and expenses	$13,859,333.30	
Outward freight and delivery expenses	3,055,603.75	
Maintenance and repairs	1,358,706.83	
Taxes (other than income taxes)	488,458.70	
Selling, general and administrative expenses	1,840,889.93	
	20,602,992.51	
	$2,172,179.85	$2,002,942.28
Deduct: Interest on funded debt	$983,589.95	$1,022,054.44
Interest on unfunded debt	226,746.64	250,372.52
Amortization of debt discount and expense	97,232.64	111,953.43
Depreciation	1,316,342.12	1,240,028.55
Depletion	187,336.87	174,151.96
Provision for doubtful accounts	156,909.09	235,661.22
Provision for income taxes	95,968.00	.....
Dividends accrued but not being currently paid on preferred stocks of subsidiaries	177,050.46	187,263.25
	3,241,175.77	3,221,485.37
NET LOSS FOR PERIOD	*$1,068,995.92*	*$1,218,543.09*

Detailed figures in this form were not compiled for the respective quarters during 1934 but only for the full year, as presented in the Annual Report.

In the above consolidafed financial statement foreign accounts are stated on the basis of $4.85 for the pound sterling and at parity of exchange for Canadian and Newfoundland currencies without adjustment of differences. It is the practice of the companies to reflect in current operations any differences between these rates and the current quotations at the time funds are actually purchased or transferred.

Unpaid cumulative dividends on 7% and 6% cumulative preferred stocks of International Paper and Power Company for the period from April 15, 1931, to March 31, 1935, amount, respectively, to $24,866,760.62 and $87,875.00 or a total of $24,954,635.62.

The above statements are subject to final adjustment at December 31 (end of fiscal year).

River Raisin To Have Cleveland Plant

CLEVELAND, Ohio, August 12, 1935—The River Raisin Paper Company, of Monroe, Mich., plans to establish a branch plant in this city early this fall. The local unit, to involve expenditure of more than $175,000,000 for buildings and equipment, will function as a converting and distributing plant. The company manufactures corrugated containers and solid fiber board cases.

Zellerbach Co. To Build Warehouse

LOS ANGELES, Cal., August 5, 1935—Construction of a $225,000 warehouse at 1200 South Evergreen street for the Zellerbach Paper Company is planned for the immediate future, it was announced upon completion of plans and specifications for the project.

The structure will rise one story in height and will have ground dimensions 940x172 feet, according to plans.

Nekoosa-Edwards Paper Co.'s New Department

Production of Ruled and Specialty Papers to be Started Within Few Weeks—New Division to be Located at Port Edwards Plant—J. F. Keville and H. H. Dilno, Formerly With Kalamazoo, Become Associated With New NEPCO Venture

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., August 12, 1935.—A new department to be known as the ruled and specialty papers division has been established by the Nekoosa-Edwards Paper Company, and production of the line will be started within a few weeks.

This new division will be located at the company's mill at Port Edwards, Wis. A new building is under construction to house this department, and the machinery and other equipment have been ordered.

J. F. Keville, sales manager for the last ten years of the school papers and stationery division of the Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich., has resigned to become associated with the NEPCO organization, and will have charge of sales of the new papers. NEPCO grades will be converted into a wide range of school papers, stationery, household papers and industrial paper specialties.

Production in the new division will be in charge of H. H. Dilno, who was associated with Mr. Keville for a number of years at the Kalamazoo mill. He is thoroughly experienced in the manufacture of converted papers.

Big Storage Warehouse Project

With permission having been granted the Wisconsin Valley Improvement Company to construct a mammoth storage reservoir on the Big Eau Pleine River, preparations are now being made to start the work. It is expected that the project will be fully under way by early fall.

The entire plan for flowage control of the Wisconsin River for the benefit of an important group of paper mills was explained at a meeting of the Rotary club at Wisconsin Rapids, Wis. last week by W. F. Thiele and Tom Utegaard, engineers of the Consolidated Water Power and Paper Company.

Contemplated development of the Wisconsin River would increase by 119 square miles the water area in central Wisconsin, they said, and will create a paradise for fishing and other outdoor recreation, and an increase in tourist patronage. Hydro-electric power will be boosted 358,000,000 kilowatt hours per year.

Mr. Thiele related the history of the Wisconsin Valley Improvement Company, of which George W. Mead, president of the Consolidated company, is the head. It is an association of paper mills organized in 1906 to control the river flowage by reservoirs. A year later the Wisconsin legislature provided legal authority for the operations. Two years ago a supplementary law was passed giving the Improvement company authority to collect tolls and provide for a stock membership.

Twenty reservoirs were established beginning with the Lac Vieux Desert at the Wisconsin-Michigan line. The recently authorized Rainbow reservoir now under construction in Oneida county will provide complete control of the Wisconsin River as far as Rhinelander, Wis. After the Big and Little Eau Pleine reservoirs are built in Wood, Portage and Marathon counties, the river will be controlled as far as Wisconsin Rapids.

Mr. Utegaard explained that the development program is divided into three parts, the construction of the Big and Little Eau Pleine reservoirs; building of three hydro-electric plants, one just west of Knowlton, Wis., another near Pentewell, Wis., and a third at Germantown, near Necedah, Wis. These will be connected by a system of transmission lines. The Big Eau Pleine reservoir will cover 24,000 acres.

Financing of the Big Eau Pleine project, which will cost about $750,000, will be arranged, and bids then will be asked for actual construction.

The time limit has expired for securing riparian lands for the Little Eau Pleine reservoir, but a bill is pending in the Wisconsin Legislature to extend the time. The bill has passed the Assembly.

Pulpwood Movement Heavy

With the arrival of the third raft of pulpwood of the season containing 9,000 cords, the Newaygo Tug Line subsidiary has supplied a total of 27,000 cords of pulpwood to the Consolidated Water Power and Paper Company's mills at its rail loading hoist on Lake Superior at Ashland, Wis. The last shipment was from Nipigon Bay, Canada. The next raft will contain 12,000 cords, and will be brought over from the Black Bay region of Canada. A smaller raft will be towed across by the tug Butterfield later from Madeline Island, completing the movement of wood for the season. E. P. Sederberg, of Duluth, Minn., has been appointed as the new manager of the Newaygo Tug Lines, Inc., according to announcement of H. S. Mosher, manager of the Newaygo Timber Company at Port Arthur, Canada. Phil Nobles, of Stevens Point, Wis., has been in charge temporarily, following the transfer of the former manager to Isle Royale, where logging operations for the Consolidated are in progress.

A cargo of 1,700 cords of pulpwood was brought to the docks at DePere, Wis., by the steamer *Newbrundoc* from Port Arthur, Canada, last week for the Kimberly-Clark Corporation's mill at Kimberly, Wis. The wood was transferred to barges and shipped up the Fox River to Kimberly by the Fox River Navigation Company's tugs. The trip was made as an experiment to determine whether this method of shipment is more economical than rail delivery.

Annual Paper Mill Outings

Four thousand employees of the Nekoosa-Edwards Paper Company's mills at Port Edwards and Nekoosa, Wis., gathered at Nepco Lake, Saturday, August 3, with their families for the company's annual picnic. Baseball, swimming, boating, dancing and other amusement were enjoyed, and prizes totalling $250 were given winners of various events.

Employees of the Menasha Products Division of the Marathon Paper Mills Company, Menasha, Wis., also held their annual picnic at the Menasha City Park, Saturday, August 3. The total attendance exceeded 2,500. The day was spent in games and contests, and an orchestra was engaged for dancing in the evening. The mill council had charge of the arrangements.

Employees of the Neenah Paper Company, Neenah, Wis., held their annual picnic Saturday, August 10, at

Lakeview Park at Neenah. A program of athletic sports was arranged, and a dance was held in the pavilion.

News of the Industry

County agents and agricultural committees of six Wisconsin counties were guests of the Nekoosa-Edwards Paper Company last week for an inspection of the company's forestry nursery at Nepco Lake. They are studying methods to be used in planting of shelter belts and wood lots under the federal forestry program. The nursery, containing more than six million seedlings, was visited by the delegation, and the operations were explained by W. B. Brenner, superintendent of the nursery.

Earl Hill, for many years a sales representative of the Consolidated Water Power and Paper Company, travelling out of the main office at Wisconsin Rapids, Wis., has been appointed head of the sales department at Chicago, Ill. He took over his new duties last week.

Edwin Laughlin, of Pennsgrove, N. J., and Miss Vivian Wedgewood, of Appleton, Wis., will be married September 7 at the Wedgewood home. Mr. Laughlin was a student at the Institute of Paper Chemistry at Appleton, where he received the degrees of Master of Science and Doctor of Philosophy. He was graduated three years ago, and is now associated with the E. I. du Pont de Nemours Company, at Wilimington, Del.

Rudolph A. Jacoby of Appleton, Wis., former manager of the Union Bag and Paper Company's mill at Kaukauna, Wis., who died recently, left an estate of $33,000, according to the final accounting in probate court. He carried insurance amounting to $32,000.

Label Manufacturers Meet in Chicago

The annual meeting of the Label Manufacturers Association was held at Chicago on July 26. Although the attendance was affected by the torrid weather, the business of the meeting received close attention. Several important amendments to the Constitution of the association were adopted and new officers and board of directors were elected. The principal speaker was John N. Van der Vries, division manager of the Chamber of Commerce of U. S. A. and his subject was "Trade Associations—can they deliver the goods?"

The following members were elected to serve as the Board of Directors for the ensuing year: A. W. Brockway of Muirson Label Company, Brooklyn, N. Y.; W. E. Craig of Brandau-Craig-Dickerson Company, Nashville, Tenn.; J. C. Doeller of Simpson & Doeller Company, Baltimore, Md.; Richard Dorsey of United States Printing and Lithograph Company, Baltimore, Md.; G. K. Horn of Maryland Color Printing Company, Baltimore, Md.; E. J. Kittredge of R. J. Kittredge & Co., Chicago, Ill.; C. H. McGill of McGill Lithograph Company, Minneapolis, Minn.; C. R. Schmidt of Schmidt Lithograph Company, San Francisco, Calif.; W. L. Taylor of Multi-Colortype Company, Cincinnati, Ohio; A. J. Wilmanns of Wilmanns Brothers Company, Milwaukee, Wisc.; L. B. Woodward of Woodward & Tiernan Printing Company, St. Louis, Mo.

The following members were elected officers for the ensuing year: President, G. K. Horn of Maryland Color Printing Company; 1st Vice-President, J. C. Doeller of Simpson & Doeller Company; 2nd Vice-President, W. L. Taylor of Multi-Colortype Company; 3rd Vice-President, C. R. Schmidt, of Schmidt Lithograph Company; Treasurer, A. W. Brockway of Muirson Label Company.

The officers also serve as the Executive Committee.

Charles R. Cosby continues as Executive Secretary.

The next meeting of the association will be held in October or November at a place to be selected.

Rush Work To Open Rushmore Mills

[FROM OUR REGULAR CORRESPONDENT]

GOUVERNEUR, N. Y., August 12, 1935.—Construction work on the new addition to the Rushmore Paper Mills is progressing rapidly and indications are that the entire plant will be in operation by September 1. Remodeling of the paper machine is under way under the supervision of the Bagley & Sewell Company, as it was found necessary to make alterations in order to produce the products which the new owners plan to manufacture. Announcement of the reopening of the mill has created a building boom in this section and business conditions have been greatly stimulated. A new railroad branch line has also been laid out which extends from the main line of the New York Central to the switch which connects with the siding at the plant and this is expected to improve shipping facilities. Considerable time has also been spent in relaying ties on the bridge spanning the Oswegatchie River leading to the mill. It is estimated that nearly two miles of railroad ties have already been replaced. Several new homes are also being constructed by individuals and the increased activity has been of great benefit to merchants in this section. A new restaurant for the employees is under construction which will be able to accommodate many persons. The statement made by James S. Weymss, president, early in June relative to the reopening is claimed to be responsible for the stimulus to business in this section and a large increase in population is also predicted.

The Rushmore Paper Mills acquired the title to the pulp and paper mill and the water power rights of the Oswegatchie Paper Company, early in June and at that time announcement was made that several weeks would be required to place the property in first-class condition before starting operations. The company was organized in 1926 in this state with James Weymss, of Lancaster, N. H., as president and treasurer and his brother, Courtney T. Weymss as secretary. The directorate includes the above officers, Frederick S. Weymss and Charles W. Valentine. The main office of the company is located in New York City.

John M. Driver Gets Patent on Bag

John M. Driver, 633 Bryant street, San Francisco, Cal., under date of May 28, 1935 was granted patent No. 2,000,182 which covers a 2-piece bag which is commonly termed in the trade "Half and Half," and is sometimes termed "Clearview."

Under the patent, half of the bag is made of transparent cellulose like Cellophane and other like materials, and the other half of the bag of less transparent material.

This patent covers all styles of bags made to the above specifications, i.e., Flat and Old Style Square, serrated or straight cutoff, pacquette style, Satchel Bottom, Automatic Self-Opening or any other type.

To Make Paper Boxes at Hudson Falls

HUDSON FALLS, N. Y., August 12, 1935.—A new concern to be known as the Blittersdorf Paper Box Company, has been organized here to manufacture paper boxes, containers and other paper products with a capitalization of 100 shares of stock having no par value. The largest stockholder and director is Oscar V. Blittersdorf, a resident of this village, who will also serve as president of the company. Incorporation articles were filed this week. Among the others identified with the enterprise are Charles L. Jordan and William C. Jordan, business men of Syracuse. It is understood that operations will be started here in the near future.

Champion Stockholders Approve Consolidation

Vote Seven-to-One Split-Up of Common Stock for New 6 Per Cent Preferred to Replace Three Present Preferred Issues of Company and Its Subsidiary, Champion Fibre Co.—Debts to Be Refunded and Name Changed to Champion Paper & Fibre Co.

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, August 12, 1935—Stockholders of the Champion Coated Paper Company in a special meeting last Wednesday at Hamilton, Ohio, voted approval of a seven-for-one split-up of common stock, for an issue of 6 per cent preferred stock to replace the three present 7 per cent issues of preferred of the company and its subsidiary, Champion Fibre Company, for refunding debts and for changing the name of the company to Champion Paper and Fibre Company.

Listings Applied For

Champion Paper's 476,000 authorized shares of no-par common, of which 472,619 shares will be outstanding, will be listed on the Cincinnati Stock Exchange, and the 60,000 shares of $100 par value 6 per cent cumulative preferred and $5,500,000 in 4¾ per cent sinking fund debentures will be listed on the New York Stock Exchange as well as on the local board, if applications for listing to be filed shortly are approved.

The common stock, which now is approximately 85 per cent owned by management and allied interests, will be put up for listing on the New York Exchange when and if the issue becomes more widely distributed, it is learned authoritatively.

The debentures and whatever part of the new preferred stock is not taken by present holders in exchange by August 29 will be offered publicly by W. E. Hutton & Co. and Goldman, Sachs & Co., according to plans contingent upon SEC approval.

Annual Report

The report of Champion Coated Paper Company and subsidiaries for fiscal year ended April 28, 1935, certified by independent auditors, shows net profit of $981,969 after depreciation, depletion, amortization and federal taxes. This is equal after dividends on the 7 per cent preferred stock of Champion Fibre Co., and dividends on 7 per cent first preferred and 7 per cent special preferred stocks of Champion Coated Paper Company, to $8.85 a share (par $100) on 67,517 shares of common stock.

Current assets as of April 28, 1935, including $1,111,986 cash, amounted to $7,745,096 while current liabilities were $2,365,133. Inventories were $4,649,487.

Officers Elected

Logan Thomson, of Cincinnati, was elected president of the newly-formed company at an organization meeting held in Hamilton Friday afternoon. Alexander Thomson, who had served as president of the Champion Coated Paper Company since the death of his late father, Peter G. Thomson, was elected to be chairman of the Board of Directors.

Other officials chosen were Reuben B. Robertson, Sr., Canton, N. C., executive vice-president; Reuben Robertson, Jr., Canton, vice president; and Walter Dantoft, Canton, assistant secretary.

New Machinery for Gummed Products

Announcement that $100,000 worth of new machinery is being purchased by the Gummed Products Company, in line with its expansion program, which includes expenditure of $300,000 for new factory and office buildings, was made by officials of the company.

An order has just been placed for a new gumming machine, to be furnished by the Bevis Machine Company, of Middletown. In addition, other pieces of machinery have been ordered recently, the entire group costing about $50,000. About $25,000 worth was purchased earlier this year, and $25,000 more will be put into new machinery before 1935 ends, it was said.

Hooven To Retire Shares

Directors of the Hooven and Allison Company, Xenia, have authorized retirement of 3000 shares of preferred stock at not to exceed $100 a share and accrued interest at 7 per cent from June 1 to August 31, 1935. The offer expires August 15.

The board authorized the retirement of preferred stock June 5 at $85 per share. The plan is a result of the low price of raw material, the company having more capital on hand than can be profitably used in operations.

Paper Shipments Increase

The monthly report of the Miami Valley Paper Shippers' Association, Inc., for the month of July, shows increased number of shipments by the 23 member paper mills of the Miami Valley. The total sent out in pool and carload lots was 10,940,000 pounds, an increase of 80,000 pounds over the previous month.

Arthur Lawless To Be Gen. Sales Manager

The Hano Paper Corporation, 47-04 31st Place, Long Island City, N. Y. announces the appointment of Mr. Arthur Lawless, as general sales manager of the firm's complete lines of converted papers, tablets, composition books, etc.

Mr. Lawless will give his personal attention to the Metropolitan District, New England and Philadelphia Section, in which he has built such an enviable reputation and following.

In making the announcement the company says, "His host of friends will be glad to know that his sales policies shall be ours, and that the utmost co-operation will be given to build, exclusively through the trade, a mutually pleasant and profitable relationship."

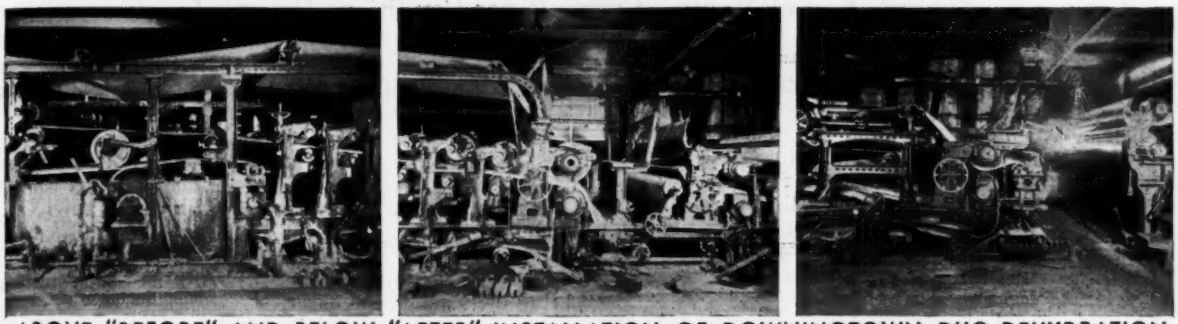
H. E. Prins Gets Felt Guide Patent

Patent rights for felt guide have been granted to Henry E. Prins, 15 Spring street, Hudson, N. Y.

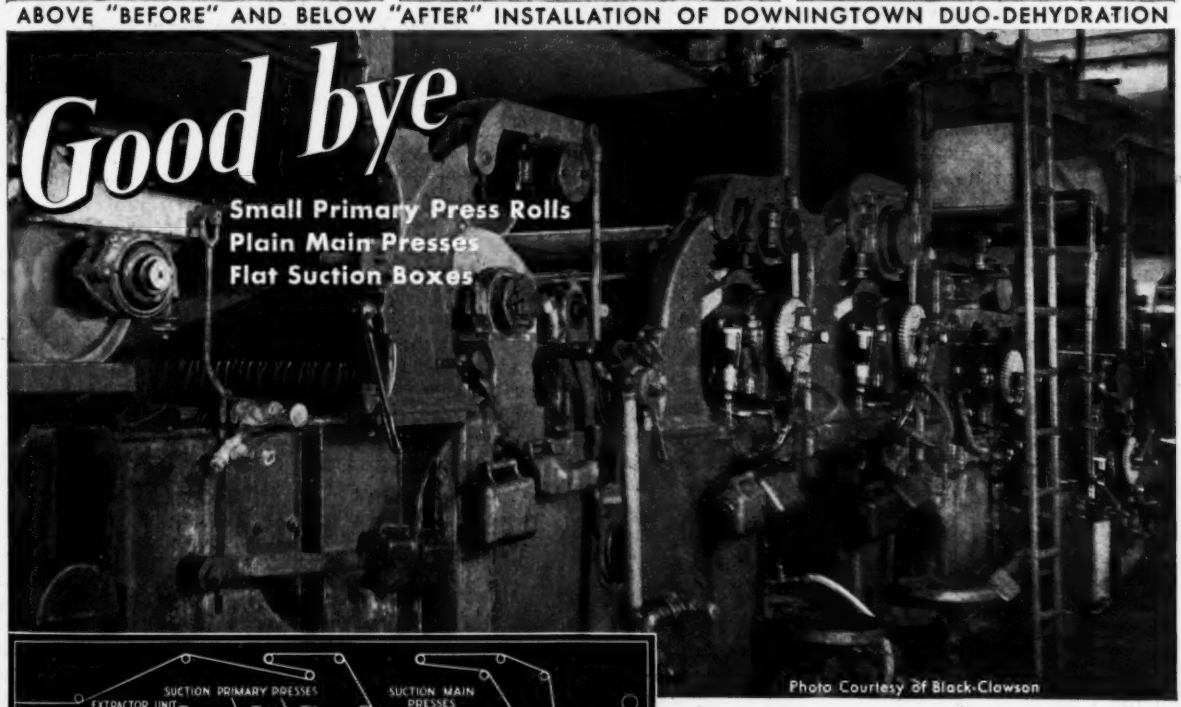
The guide consists of two cones built and connected to a housing. The cones are used to nip the felt which in turn pulls a swinging guide roll which is attached to the shaft of one of the cones with a light chain. As the guide roll is pulled with the run of the felt and towards the cone the felt leaves nip of cones and guide roll is pulled back against run of felt to its original position by a coil spring. The cones have adjustments on them, to be set so edge of felt will not become bruised.

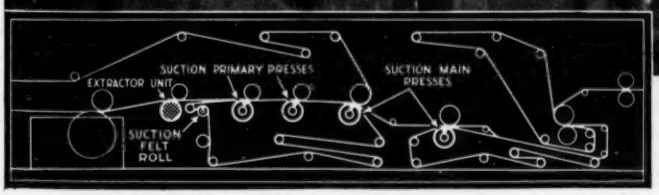
There are but two moving parts which are the cones and they hold felt within ¼ inch sidewise movement.

DOWNINGTOWN



ABOVE "BEFORE" AND BELOW "AFTER" INSTALLATION OF DOWNINGTOWN DUO-DEHYDRATION





at Container Corp. of America, Chicago

Patented

Extractors and Duo-Dehydration are covered by Downingtown Patents Nos. as follows:
1,996,661—1,992,713
RE 19,521—1,935,837
1,991,346—1,934,543
1,911,310—1,998,046

Streamlining of airplanes, trains, automobiles, etc. increases speed and reduces cost of operation, therefore Downingtown Duo-Dehydration may fittingly be considered as a "Streamlined Press Part." Press nips are reduced to minimum and all water removed vertically downward with no back pressures in the board structure. The Downingtown Mfg. Co., Downingtown, Penna.

No Board Machine is Modern *Without* DUO-DEHYDRATION

TAPPI Fall Meeting—Philadelphia-Atlantic City—Sept. 18-21.

Fine Paper Mills Moderately Active in Ontario

Although Advance Orders Are Scarce and Manufacturing Operations Below Full Schedule, General Outlook Is Considered Favorable—Sharp Upturn Anticipated In Sales Volume Towards End of Month—Coarse Paper Conditions Unsettled

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., August 12, 1935.—Reports from most of the fine paper mills throughout the province indicate that holiday conditions still exist and that most of the companies are experiencing some difficulty in keeping their machines operating on anything like full schedule. In nearly all cases the mills have very little ahead in the way of orders but the general outlook is favorable and it would not be surprising if there was a sharp upturn in sales volume at the close of the present month when the holiday season is close to termination.

There was practically no acceleration during July but a pick-up by the end of the present month is looked for. Much of the lower volume, of course, has been seasonal and some of it can be laid to the foggy political outlook in Canada and unsettled conditions in other countries. The tariff possibilities, following the not unlikely accession of another Government at Ottawa, is causing concern to many in the paper industry.

In the meantime, it may be said that fine papers and magazine stocks generally are steady, following the recent reduction of half a cent in offset book and featherweight book. There is quite a fair demand for Canadian made blanks, covers and blottings, while a number of specialty lines are holding their own quite satisfactorily.

Light weight papers and specialty lines being turned out by the tissue mills are in good demand and there is a fair call for waxing, grease-proof and glassine

The coarse paper market is decidedly quiet. Distributors of kraft and other wrapping lines report some unsettlement in the market owing to overproduction. At least two additional firms are putting wrappings on to a market which had already been adequate to absorb the tonnages turned out by the already established mills. The demand for paper bags, also, is light, although the flour sack section of the bag industry is strong with a fairly good demand.

In the rag and paper stock department of the paper industry the market appears to be getting firmer, with a fair demand locally. Many export enquiries are coming from the United States. Inventories are showing quite a sharp drop but there is still ample stocks to cover all local needs.

Interesting Export Figures

According to statistics just issued from Ottawa the export of pulpwood in June, all of which goes to the United States, amount to 88,901 cords of the value of $702,907. This was somewhat lower than a year ago but twice as large as the May export. The export of paper in June, along with manufacturers of paper, reached a value of $8,181,747, which was an advance of about one million dollars over last year. The chief purchaser was the United States to the value of $6,064,026, the United Kingdom coming next with $775,394.

The largest item was newsprint, which went to 37 countries and the invoiced value was $7,690,850. The leading customers were as follows: United States $6,010,733, United Kingdom $517,500, Australia $260,265, New Zealand $103,909, Argentina $202,212, Japan $129,515, China $93,557, Chile $91,117, Uruguay $33,452, Irish Free State $54,576, Brazil $32,366, Hong Kong $22,618, British South Africa $26,265, Mexico $22,193, Peru $22,858.

Canadian book paper went to 21 countries to the value of $36,836, an increase of over $3,000. The largest purchasers were: Australia at $16,587; United Kingdom $10,164, New Zealand $4,840 and British South Africa $1,150.

The export of wall paper continues to make advances and in June the amount was 101,970 rolls, Newfoundland being the leading purchaser.

Power Proposals and the Paper Mills

Before the Port Arthur Public Utilities Commission at a meeting there this week was a letter from the Ontario Hydro-Electric Power Commission setting forth certain benefits the Thunder Bay system would receive if the proposed new power rates are put into effect. Depending upon whether the paper and pulp mills of the district will guarantee an increased consumption of power, the new rates would become effective. The Ontario Commission asks a resolution be presented by the Port Arthur Public Utilities in respect to their views. The two bodies are expected to hold a joint meeting shortly. The Ontario Commission points out that for 1935 the Thunder Bay System would show a thirteenth debit of $28,611.68 included in the total amount of power purchased for the 1935 statement. In 1936, under the new rates, the debit would be changed to a credit of $11,074.44 and the system should show a net surplus after depreciation of between $30,000 and $35,000. In 1937 a credit of $39,412.70 and a surplus of over $60,000 would accrue to Port Arthur.

Notes of the Industry

N. E. Wainwright, president of the Don Valley Paper Mills, Ltd., Toronto, has returned from an enjoyable holiday trip to Murray Bay and other resorts on the St. Lawrence.

H. V. Hodder, secretary-manager of the Canadian Paper Box Manufacturers' Association, head office Toronto, has returned to his home in the city following a visit to his father in Pasadena, Cal. Mr. Hodder travelled from Chicago to the California city by plane and enjoyed the experience exceedingly.

Pacific Mills, Ltd., British Columbia paper manufacturing concern controlled by Crown-Zellerbach Corp., reports net profit of $210,454 for the year ended April 30, 1935. This compares with $182,808 in the preceding year. These figures are after charges for depreciation, depletion, bond interest and income taxes.

E. R. Buscombe Paper Stock, Ltd., Toronto, has been granted Ontario incorporation, with a capital stock of $40,000 and power to deal in waste paper and other paper products. The head of the company, E. R. Buscombe, was at one time with E. Pullan, Ltd., rag and paper stock dealers, Toronto.

D. B. Chant, secretary-manager of the Ontario Pulp and Paper Makers' Safety Association, is receiving the congratulations of his many friends in Ontario on his recent marriage.

Canadian International Paper Co. 1934 Report

Net Loss for Year is $3,984,823—President A. R. Graustein States That Price for Newsprint Being Charged by North American Mills Is Not Sufficient To Cover More Than Cash-Out-of-Pocket Costs for Labor, Materials and Transportation to Market

President Archibald R. Graustein, in submitting the statement of consolidated profit and loss and deficit for the year 1934 and consolidated balance sheet at December 31, 1934, with supporting schedules of the Canadian International Paper Company, says:

"The Kipawa and Hawkesbury pulp mills operated substantially at capacity throughout 1934, their output amounting to 146,027 tons of bleached sulphite pulp as compared to 141,111 tons in the previous year. Average prices realized were higher than in 1933.

"During 1934, consumption of newsprint in United States and Canada was 13.6 per cent in excess of 1933 and newsprint mills of the Company and its subsidiaries operated at 82 per cent of capacity, producing 659,566 tons during 1934 as compared to 544,373 tons in 1933. In spite of this improvement in volume operating results of the newsprint mills were less satisfactory than in 1933, as prices continued the entire year at the low level to which they declined in April, 1933.

"It is generally recognized that the price now being charged for newsprint by North American mills is not sufficient to cover much more than cash-out-of-pocket costs for labor, materials and transportation to market, and in many cases not even that.

"After all charges, including interest on junior bonds (all owned by International Paper Company), depreciation, depletion, etc., there was a net loss for the year 1934 of $3,984,823, not including profit of $192,390 on bonds redeemed. Deficit at December 31, 1934, was $10,191,364.

"At the year end, bank debt of subsidiaries amounted to $2,274,000. Canadian International Paper Company itself continues free of indebtedness to banks."

July Newsprint Statistics

Production of newsprint in Canada during July, 1935, amounted to 234,266 tons and shipments to 226,445 tons, according to the Newsprint Service Bureau. Production in the United States was 73,108 tons and shipments 71,070 tons, making a total United States and Canadian newsprint production of 307,374 tons and shipments of 297,515 tons. During July, 29,336 tons of newsprint were made in Newfoundland and 1,933 tons in Mexico, so that the total North American production for the month amounted to 338,643 tons. Total production in July, 1934, was 313,767 tons.

The Canadian mills produced 47,638 tons more in the first seven months of 1935 than in the first seven months of 1934, which was an increase of 3 per cent. The output in the United States was 32,387 tons or 6 per cent less than for the first seven months of 1934, in Newfoundland 12,229 tons or 7 per cent more, and in Mexico 636 tons more, making a total increase of 28,116 tons, or one per cent.

Stocks of newsprint paper at Canadian mills were reported at 65,705 tons at the end of July and at United States mills 18,721 tons, making a combined total of 84,426 tons compared with 74,567 tons on June 30, 1935.

Weekly Production Ratio Report

Reports to the American Paper and Pulp Association show the following Over-All Production Ratios for the designated periods.

	Reporting Mills		Total Production
	Number	Capacity	Ratio
September, 1934	292–299	.....	59.4%
October, 1934	297–394	.....	64.7
November, 1934	385–399	.....	61.7
December, 1934(a)	396–404	.....	62.1
January, 1935	397–411	.....	65.8
February, 1935	407–409	.....	70.0
March, 1935	406–408	.....	70.5
April, 1935	405–407	.....	70.0
May, 1935	378–407	.....	69.4
June, 1935	355–374	.....	72.3
* Week ending July 6, 1935 (b)	353	122,528	58.6
* Week ending July 13, 1935	353	146,534	69.1
* Week ending July 20, 1935	353	147,032	71.8
* Week ending July 27, 1935	343	144,551	70.3
* Week ending August 3, 1935	262	106,939	71.1

* Subject to revision.

Statistics showing the number of mills reporting by ratio groups are given below:

NUMBER OF MILLS REPORTING

	Week ending				
Ratio Limits	July 6 1935	July 13 1935	July 20 1935	July 27 1935	Aug. 3 1935
0% to 50%	186	124	116	109	102
51% to 100%	167	229	237	234	160

According to reports from the National Paperboard Association, per cents of operation, based on "Inch-Hours" were as follows:

	September, 1934	62%	June 8, 1935	61%
	October, 1934	63	June 15, 1935	65
	November, 1934	56	June 22, 1935	65
(a)	December, 1934	53	June 29, 1935	69
	January, 1935	61	July 6, 1935	39
	February, 1935	67	July 13, 1935	63
	March, 1935	67	July 20, 1935	68
	April, 1935	61	July 27, 1935	68
	May, 1935	61	August 3, 1935	66

(a) Capacity and percentage data exclude December 25, 1934.
(b) Capacity and percentage data exclude July 4, 1935.

Revised statistics covering delinquent mill returns will be shown in later reports.

Bolton Hydro-Truss Filling

A new wood and steel Jordan filling known as the Hydro-Truss Filling has been put on the market by John W. Bolton & Sons, Inc., Lawrence, Mass. The name Hydro-Truss is derived from the fact that the filling is built up under hydraulic pressure and has internal steel truss construction. It is claimed that this type of construction gives added strength to the filling and increases its length of useful life. With the Hydro-Truss Filling it is possible to get exactly the knife spacing that is required for any particular type of Jordaning.

In connection with the announcement of the Hydro-Truss Filling, the Bolton Company has issued a twenty-four page book that gives a pictorial trip through the Bolton factory and shows how strength is built into the fillings. This book has full page bleed illustrations showing the various steps in the manufacture of the filling. In addition there is a description of the Bolton Wedgeless Plug and the Emerson Jordans which are also products of the Bolton Company. This book may be obtained by writing directly to John W. Bolton & Sons, Inc., Lawrence, Mass. who will have one of their representatives call and present the book to you.

Boston Paper Industry Looks For Fall Upturn

Volume of Orders for Various Grades of Paper Compares Favorably With Amount Received In Corresponding Period Last Year—Both Fine and Coarse Paper Business Continues Satisfactory for Season—Paper Box Board Fairly Active

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., August 12, 1935—Boston paper merchants, as a whole, transacted a remarkably good volume of business for the time of year during the week under review. The present summer is, in fact, unusual for the amount of orders dealers have received, so far, comparing very favorably with last year. It is expected by at least some in the trade that the "fall" upturn will take place earlier this year than usual, even late this month.

With some fine paper houses, August began better than July and business has been sustained to date; with others, the month started fairly well, although it has slowed up to a certain extent, but taken all in all, business has been satisfactory and better than expected. It is a similar story for the wrapping paper division. Box board business for the week was fair for the season. One house dealing in wood pulp sold 150 tons of that commodity.

The paper stock market continued in a healthy condition. So far in August business has been fair, becoming somewhat less active, compared with July when it was "pretty good." Considerable stock was sold in July for August delivery. Prices remained strong during the week, in some cases advancing. Under old papers, mixed papers and old newspapers continued at the same levels, although none of the dealers had any trouble in placing all they cared to sell. Collections, however, were light, falling off at least 25 per cent from the tonnage of the previous week. There was not so much material available and not so many were collecting. No. 1 kraft was in a similar position, although for this commodity the price advanced to 1.00 @ 1.10 f.o.b. Boston from .90 @ 1.00. A firm sold 100 tons of a good grade of waste paper during July for August delivery. One house sold three carloads of corrugated boxes during the week at $9.00 a ton. A small carload of paper wool strings sold at .95 delivered mill. Bagging was very firm and in good demand. About 75 tons of No. 1 scrap burlap sold in July for August delivery. During the week scrap burlap moved at 1.60 @ 1.70 f.o.b. Boston, advancing from 1.30 @ 1.35. Fifty tons of domestic scrap burlap sold at 1.68 f.o.b. Boston. Sales of bagging included a carload at 1.59, f.o.b. Boston. A small carload of low-grade hemp moved at .06¼, f.o.b. Boston. There was a fair demand for new domestic rags. Three carloads of good silesias No. 1 moved at .04½ f.o.b. Boston.

In old domestic rags, roofing rags were in good demand, with advances. No. 1 roofing stock advanced to 1.30 @ 1.35, f.o.b. Boston, compared with a former price of 1.20 @ 1.25; No. 2 to 1.00 @ 1.05, compared with .95 @ 1.00, and No. 3 to .95 @ 1.00, against .90. In foreign rags, dark cottons rose in sympathy with domestic roofing stock, reaching 1.50 to 1.55, compared with a previous quotation of 1.35 @ 1.45. Some sold at 1.55, f.o.b. Boston.

News of the Industry

Considerable comment has been created in the trade by Brown Company's Solkacel, a sheet that has the outstanding characteristic of increasing in strength when thoroughly saturated with moisture. It is made in a variety of types and colors to meet the various converting requirements and has been used in certain fields in the last year and a half. It opens up fields in which paper has not been used heretofore.

"Direct Advertising," the magazine issued by the Papermakers Advertising Club of Boston, is incorporating a new feature in the form of insert pages supplied by New England paper merchants who list the respective papers they carry that are advertised in the publication. A further helpful reference on each of these pages is a listing of the prices up to ton quantities for each grade.

Floyd H. Blackman, secretary of D. F. Munroe Company, passed a vacation at his summer residence in Chichester, N. H., last week.

J. Harry Ellis, head of the wrapping paper department of Carter, Rice & Co., Corp., has gone for a vacation at his cottage in South Harwich, Cape Cod.

Fred Herbolzheimer, head of the fine paper department of the Andrews Paper Company, has been passing a two weeks' vacation at Long Beach, York, Me.

Chester M. Edmond, of the sales staff of Baird & Bartlett Company, is at Hampton Beach, N. H., for two weeks with his family.

William F. Man, of the sales staff of the same company, has sailed for a two weeks' trip to Bermuda.

Ralph L. Day, of the sales staff at the New England office of the American Writing Paper Company, has returned after a two weeks' vacation at Swampscott, Mass.

New Mexico Paper Co. Starts

ALBUQUERQUE, N. M., August 10, 1935—The New Mexico Paper Company to be located in Albuquerque has filed articles of incorporation. This company is a division of the Carter, Rice & Carpenter Paper Company of Denver, and has the same officers as the Denver company.

Phil H. Knowlton, who has represented the Carter, Rice & Carpenter Company in New Mexico for the past thirty years, is one of the directors. T. A. Diekman, who has been assistant sales manager at Denver for the past fifteen years, will be the manager of the new company. Complete stocks of both printers and stationers, as well as wrapping papers, will be carried in the warehouse at Albuquerque. Mr. Diekman will move his family to Albuquerque, and employ salesmen and other help to take care of the business.

This is the first wholesale paper house to be established in the state of New Mexico.

To Dismantle Baeder-Adamson Plant

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 12, 1935.—A local wrecking company has announced that it soon will begin work of dismantling the 24-acre plant of the Baeder-Adamson Paper Mills at Philadelphia. The company recently was consolidated with the Minnesota Mining and Manufacturing Company, Minneapolis. More than 100 men, including several specialists from here who worked with the company on the local slum clearance project, will be employed.

Chicago Paper Business Comparatively Quiet

Inquiries for Future Requirements, However, Indicate Broader Autumn Demand for Practically All Grades of Paper—General Industrial Improvement Beneficial to Both Fine and Coarse Paper Divisions—Newsprint Paper Conditions Unchanged

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., August 12, 1935.—Comparatively quiet at the present time, the Chicago paper market is nevertheless counting materially on an appreciable Fall upturn. Inquiries continue to come in which indicate a broadening out of the demand in virtually all lines sold in the Chicago area and the feeling continues to grow, among purchasing agents and buyers in general, that no further marked decline in markets may be expected. This is lending itself to a strengthened position when the Fall buying season opens.

Ground Wood Papers Improved

Ground woods continued to give a better account of themselves during the past week and the sentiment within this industry is reported much improved. Markets are stable and show signs of a higher trend. Newsprint has shown little disposition to overcome its present position. Fine papers felt the effects of the season but general improvement in the retail business of the country was beneficial to fine papers as well as to course papers, particularly wrappings, where demand has shown improvement.

Local commentators point to the good summer retail business as a forerunner of a marked upturn in direct mail advertising in the Fall. Bonds and ledgers felt the improvement. Tissues also were reported in a slightly better position. Books and covers reported more interest. Paper board was in a stronger position for Fall betterment. Waste papers continued comparatively inactive with the exception of one or two of the higher grades.

State Sales Tax Problems

The Illinois Chamber of Commerce, surveying the Illinois industrial field as to interest shown in an effort to remove "production sales" from state sales tax provisions, finds the paper box industry and other paper lines very much interested in such a program. Michigan recently passed an amendment to its sales tax eliminating sales of goods used in the process of manufacture of a finished product from the sales tax stipulations. Illinois feels that such a ruling or amendment could very properly be adopted here.

While a good share of the paper industry, particularly the wrapping paper group, has already secured rulings permitting avoidance of tax payment, each of the manufacturers continue to have a distinct problem arising through the purchase of equipment designed for manufacturing uses within their own plants.

Newsprint Freight Rates

The Interstate Commerce Commission has ordered suspension of reduced all-rail rates on newsprint paper from eastern origins to Chicago which were to become effective this week. The protests were based on failure to make proportionate adjustments in the rail-lake and rail-lake-rail rates.

The suspended rates are contained in supplement 74 to Van Ummersen I.C.C. 220. The reduced rates were to go into effect and apply from the Portland group, Bangor group, Springfield group and Boston group points. The standard all-rail rate on newsprint paper from Portland group points to Chicago has been 40 cents with a differential all-rail rate of 39 cents.

It was proposed to reduce the standard all-rail rate to 36½ cents and the differential all-rail rate to 35½ cents without any change in rail-lake rates. The suspension is expected to result in a finding by the commission whether the usual differentials in favor of regulated lake carriers must be granted in all instances where rail lines reduce their rates. The protest referred to above was made by F. W. Dever, vice president of the Great Lakes Transit Corporation.

Association Activities

The Chicago Paper Association recently pointed out the benefits to the local wrapping paper industry arising from rulings which make it unnecessary for them to pay the tax—particularly since the tax has risen from 2 to 3 per cent. James Danehy, secretary of the association, has stressed the value of the association, even if only for the one ruling. It is estimated that nearly $200,000 a year has been saved association members over this single program.

The coarse paper group is in the midst of a campaign to increase its membership which even now is said to represent 85 per cent of the wrapping paper volume of Chicago. Five new members recently reported are: Fried & Bell Paper Company; Goldberg Paper Company; Atlas Paper Company; Knox and Schneider Paper Company and the Odman Paper Company.

News of the Industry

Friends of Jack Hillyer, vice president and general manager of the Whitaker Paper Company with offices in Chicago, will be glad to learn that he is virtually recovered from an illness extending over the past six months. The former veteran golfer of the SAPEYES will not get back into golfing harness this summer but otherwise his friends report him back to normal.

Dwight Brothers Paper Company, has recently issued an announcement relative to a new idea in paper sampling which is creating widespread interest among Chicago paper buyers. The idea centers around the "Dwight Sampler," a new idea in sampling which is reported as greatly simplyfying the finding of paper.

The purpose of the Sampler is really explained in the first paragraph of the announcement folder: "How many times have you needed to make a quick comparison of papers only to discover that you couldn't find what you wanted? How often have you said 'For the life of me I can't remember where I put that sample?' "

Daily Sales Cover Stock, manufactured by the Chemical Paper Manufacturing Company, has been added to the line of Parker, Thomas & Tucker, Chicago jobbers, which already includes index, folder and manifold items made by the same company.

The Heco Envelope Company has recently announced an unusual development in envelope papers which will be of interest to the paper industry. The development features "Ciscraft," now being made in production by one of Heco's regular sources of supply. The new product is credited with having opacity, strength and printing surface and ideally suited for the mailing of confidential matter; heavy documents and for the printing of half tones.

Canadian Newsprint Outlook More Promising

Rising Quotations for Securities Reflect Encouraged Sentiment Regarding Prospect for Forthcoming Year—Indicates Newsprint Paper Industry of Dominion Will Stand Firm In Its Endeavor to Secure Long-Delayed Price Improvement

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., August 12, 1935—The fact that there has been a firmer market for newsprint securities during the past week is regarded here as reflecting an encouraged feeling with regard to the industry's outlook in 1936.

In recent weeks the industry has been sharply disturbed by the efforts of one or two large United States publishers who have offered substantial amounts of tonnage to a certain Canadian producer provided the producer would fix the 1936 price at the present low level.

These efforts are a repetition of those made by American publishers last October when the hope of a price advance for 1935 was destroyed.

As rising quotations in newsprint bonds would seem to suggest, there is apparently now a feeling that similar results may be avoided for 1936, and that the industry may stand firm in its endeavor to secure the long-delayed price improvement on which further constructive developments for the industry would be based.

It might be mentioned in passing, as an illustration of the improved feeling in the market, that the preferred stock of the Howard Smith Paper Mills has risen from a low of 33 some time ago to the current bid of around 90.

Price Bros. Reorganization Plans

Plans for the reorganization of Price Bros. & Co., one of the largest pulp and paper and lumber concerns in Canada, now in receivership are, it seems, once more "up in the air." According to published reports here, the bondholders have definitely rejected the latest proposal by Bowater's Paper Mills, which provided for the assumption of the existing first mortgage bonds with interest in cash to commence from August 1, 1935, and arrears of interest amounting to $2,250,000 being capitalized by the issuance of additional first mortgage bonds.

Price Bros.' creditors under the new Bowater plan were to be paid in cash, which would be forthcoming from the proceeds of a new issue of $6 millions in second mortgage bonds to be underwritten by Bowaters, the balance after liquidation of creditors' claims to be applied to bank loans and to provide needed working capital.

The bondholders have given very careful consideration to this proposal, but are said to have decided against it, having other plans for the financial rehabilitation of the company.

Anglo-Newfoundland's Profits

Profits for the last financial year of $1,297,500 are reported by the Anglo-Newfoundland Development Company, the newsprint concern in Newfoundland controlled by Lord Rothermere and associates. This compares with $1,225,722 for the previous year.

An interim dividend of 2½ per cent was paid in February last and the final dividend of 3½ per cent has now been declared.

According to Frank Humphrey, president, who presided at the annual meeting, excellent results have been obtained from the company's pulpwood, the yield per cord being well above the average owing to the nature of its growth.

Reference was made by the chairman to the arrangement with a long-established American firm which specializes in development of purified cellulose from wood. He said:

"They have, through research development work, evolved several products which would seem to offer very attractive possibilities. Furthermore, I would say that this American firm is in our view easily the leader in this particular field. As a result of this transaction we have secured for ourselves exclusive rights for a period of years to manufacture, produce, use and sell throughout the British Empire, exclusive of Canada, the products which they have developed or may later develop in this field. We feel that this arrangement should prove a very desirable one and has great potentialities."

Frank Clarke, vice-president of the Anglo-Canadian Pulp and Paper Mills, has retired from the board of Anglo-Newfoundland Development Co., owing to increase in pressure of his work.

Outlook for Bathurst Bright

Satisfactory improvement over the business for the same period last year is reported to have been achieved by the Bathurst Power and Paper Company for the first half of 1935.

Pulp sales, which were on a materially larger scale last year than in 1933, have continued to expand. In common with other newsprint operations, however, this department of the company's business has continued unprofitable.

Prospects are for a further improvement in profits and earnings for the current year as compared with 1934 when total income showed a gain of almost 100 per cent over the preceding year, and a net loss of $14,163 was turned into net earnings of $95,034. Liquid position of the company as at December 31st last was strong, current assets of $2,290,893 being about 16½ times current liabilities of $140,054 and net working capital of $2,150,839 indicated.

D. K. Bartlett Leaves American Writing

[FROM OUR REGULAR CORRESPONDENT]

HOLYOKE, Mass., August 12, 1935—Dwight K. Bartlett, Jr., superintendent of the Gill Division of the American Writing Paper Company, Inc., has resigned, effective September 1 to accept a position in the eastern part of the state. Mr. Bartlett came to Holyoke soon after the closing down of the Windsor Division of the Company at Windsor Locks, Conn. He had been connected with the company since his graduation from Brown University in 1923.

Use of "Mills" in Trade Name Banned

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., August 14, 1935—Unfair representation through use of the word "Mills" in the trade name of a company which does not own, control and operate a factory where its products are made, is banned in a stipulation between the Federal Trade Commission and David White and Charles G. Ranney, of Boston, trading as State Yarn and Twine Mills Co. They are engaged in the sale of twine, cordage and cable cord.

TAPPI to Visit Historical Philadelphia

To enable those who plan to attend the fall meeting of the Technical Association of the Pulp and Paper Industry to obtain the most enjoyment from the trip the following article has been prepared by Valdemar A. Jacobson of the National Aniline and Chemical Company and a member of the meeting committee.

Mill Visits and Sightseeing

The first day of the meeting, Wednesday, September 18, will be devoted to mill visits and sightseeing in Philadelphia and Wilmington. For those who are interested in the history of the Philadelphia territory the following will be of particular value. A specially arranged trip has been prepared for the ladies attending the meeting, to see many of the famous American shrines.

The few blocks between Ninth and Front, Arch and Pine Streets, contain enough historic places to keep the tourist interested for hours. Since the numbered streets run due North and South, and the named ones East and West, it is easy, even for a complete stranger to get his bearings. The only difficulty is caused by the many narrow alleys which cut erratically into otherwise staid city blocks. They are apt to confuse the traveller. At the same time they give Philadelphia the quaint old world charm for which it is famous.

(I want to suggest that participants in next September's TAPPI Convention come to Philadelphia one day before the opening, to be able to enjoy some of the sights Philadelphia has to offer. Armed with a kodak, a small note book, and some comfortable sports shoes, they will find a leisurely "Trip into the Past" a pleasure long to be remembered).

Old Swedes' Church

Old Swedes' Church, "Gloria Dei" although several blocks outside our chosen territory is the correct starting point. It stands on Swanson, just beyond Front and below Christian streets. This is not only the oldest church in Philadelphia, but one of the oldest buildings in the whole United States, dating from 1698. It contains many interesting relics, among them mementoes of the blockhouse church first built on this site in 1669.

The Swedish colony which settled on the Delaware as early as 1638, was located here. Many of the Swedes (and Finns, famed and feared for their magic powers) lived in caves or semi-subterranean huts of the neighborhood in the earliest times. Later they erected substantial houses. Some of these still are standing, on Queen Street below Front.

Blue Anchor Inn

The intersection of Dock Street and Front (the northwest corner, to be exact) is said to be the site of the Blue Anchor Inn, where William Penn first lived, on landing in Philadelphia. (The city had been partly laid out one year previous, in 1682, by his emissaries and according to his plans.) Although the old inn has vanished, it is a spot to pause at, and send one's thoughts back towards that enthusiastic yet so eminently practical man, who travelled half way around the world for his "holy experiment" of making an altruistic boyhood dream come true and establish "the City of Brotherly Love."

Old Ironsides

Walking up Second street and swinging into the alleys called Ionic and American Streets (above Sansom) we come to the Oldest House standing in Philadelphia, a red and black brick building, dating from 1692. Just around the corner, on Sansom Street above Second, is the place where Mathias Baldwin, in 1828, built the first American locomotive. It was called "Old Ironsides" and destined to draw the train connecting Philadelphia with Germantown. The notice: "When it rains, horses will draw the train, as the engine must not be taken out in the wet"—has become a national joke.

Christ Church

Continuing north on Second Street, on the west side just above Market, we come upon Christ Church, originally built in 1695. It was the first Protestant Episcopal church of the province, and was founded under a provision in the original Charter of King Charles to William Penn. John Penn, last male member of his line, is buried near the steps of the pulpit. The present building, Georgian, was erected in 1747. The old roof, its wooden balustrade with carved spindles, and the steeple, are the delight of architects and antiguarians. Here the Colonial Governors had their pews, marked by coats of arms, bearing the monogram of William and Mary. The communion silver had been presented in 1709 by Queen Anne. The chimes of Christ Church, together with those of the Liberty Bell (on what is now called Independence Hall) pealed forth the Declaration of Independence! Those were the days when Philadelphia was the seat of Government, the aristocratic and cultural capital of a new nation. George and Martha Washington regularly occupied pew 58 in Christ Church between the years of 1790 to '97. It later became the pew of John Adams, and in 1824 was used by Lafayette. Benjamin Franklin had pew 70, still used by his descendants. Robert Morris' pew was 52. His grave is in the churchyard. General Charles Lee of the Continental Army is interred beside the southwest door in the church. The Rt. Rev. William White D.D., first Bishop of Pennsylvania and long presiding Bishop of the United States, is interred before the chancel rail, his episcopal chair still stands besides the altar.

House of Betsy Ross

At 239 Arch street, between Second and Third, is the House of Betsy Ross. Washington, accompanied by Robert Morris and George Ross of Lancaster, Pa., one day called upon her and commissioned her to make a flag according to a pencil sketch of his. The skilful girl did the work beautifully. Congress accepted the new flag on June 14th, 1777. John Paul Jones was the first to fly the Stars and Stripes. Betsy Ross died in 1836 and is buried in Mt. Moriah Cemetery. Over her grave a flag is continually flying.

Going back on Third to Market and up towards Fourth, we visit Franklin Court — originally "South Orianna Street," the last residence of Benjamin Franklin. It is in the rear of 316 Market, printing shop, and faces towards Chestnut Street. Franklin lived here from 1764 to 1790. And has been pictured in the garden, surrounded by his family.

Franklin's Grave

Franklin's Grave is on Fifth and Arch Streets. A simple granite slab marks the last resting place of one of America's most famous scientists. It may be seen through an iron grating in the wall. Anyone connected with American science and industry should visit this place, and pay

tribute to the man who lies below, side by side with his wife Deborah.

We begin the second part of our excursion at Independence Square, situated between Chestnut and Walnut, Sixth and Fifth streets.

Independence Hall

Independence Hall, which dominates the Square, is historically the most important building in the United States. Here the Second Continental Congress met May 10th, 1775, here George Washington was chosen Commander in Chief of the Continental Army June 15th, 1775, here the Declaration of Independence was approved July 4th, 1776. Two years later the articles of Confederation and Perpetual Union between the States were adopted and signed here, July 9th, 1778. The Constitution of the United States was formed and signed here September 17th, 1787. And all these momentous events were rung in by the sonorous voice of the Liberty Bell which hung in the Hall's tower.

The building had originally been erected in 1735 as Colonial State House for the Province of Pennsylvania; and the bell, brought from England, was hung in the tower in 1755. It cracked while being tolled for the death of Chief Justice John Marshall, July 8th, 1835. Independence Hall was bought from the State of Pennsylvania by the City of Philadelphia in 1816, to be kept "forever, as a National Shrine."

The body of Abraham Lincoln lay there in state April 22nd to 24th, 1865. In January 1868 the Second National Encampment of the Grand Army of the Republic met there and proclaimed May 30th as annual Memorial Day. Today the Hall contains many historical portraits, as well as revolutionary and colonial relics.

At the west an open porch connects it with Congress Hall, in which the First Federal Congress sat from 1790 to 1800. Here Washington was inaugurated for his second term, March 4th, 1793, and delivered his famous farewell address in 1797. Official announcement of his death was made here two years later by Chief Justice John Marshall (at that time a Congressman).

To the east of Independence Hall is the Supreme Court House, whose second floor was occupied by the first Supreme Court session from 1791 to 1800. It now contains Colonial and American Indian relics, and paintings.

American Philosophic Society

Also on Independence Square, at 104 South Fifth street, stands the home of the American Philosophic Society. It was built in 1789, as home for the "Junto," a "society for mutual improvement" which Benjamin Franklin founded in 1727 at the age of twenty-one. He was elected first president of this now famous society, whose membership has become world-wide. After his death, in 1790, the celebrated astronomer David Rittenhouse became president, and served until his death in 1796. Thomas Jefferson, the society's third president, established its Library and Cabinet.

Across the street, on the north east corner of Fifth and Sansom streets, is the site of the Philadelphia Library, founded by subscription by Benjamin Franklin and his friends of the Junto Club in 1731. The building was erected in 1790. Present site of the library is at Locust and Juniper streets, and it is a treasure trove for scholars, historians, and lovers of old documents.

Chestnut Street Opera House

On the other side of the Square, across the street from Congress Hall, is the side of the brilliant Chestnut Street Opera House. At its opening in 1793 Washington, Adams, Jefferson, Alexander Hamilton, Robert Morris and a host of other celebrities were present. Splendid equipages brought the gay and colorful audience from outlying estate or nearby townhouse. For at that period Philadelphia was the Capital City of the young United States, socially and artistically as well as politically. "Hail Columbia," composed by Joseph Hopkinson, was first sung on the stage of the Chestnut Street Opera House on April 25th, 1798 by one Gilbert Fox. The theatre flourished until 1855. In 1840 Fanny Elssler, the famous Viennese dancer, appeared there, in 1850 the Swedish Nightingale, Jenny Lind, in 1851 the English actress Charlotte Cushman. During the forties the George Lippard incident took place. This young firebrand (a friend of Poe's) had been asked to dramatize one of his sensational novels for this theatre. Since the novel exposed the "life, mystery and vices" of famous Philadelphians, popular excitement reached a frantic pitch. A violent outburst was only prevented by the Mayor's forbidding the production at the last moment.

Carpenters' Hall

Two blocks further east on Chestnut street stands Carpenters' Hall, built for the Carpenters' Company in 1770. This company, founded in 1724, was the first association for the benefit of workers in the U. S. The first Congress of the Colonies met in this building September, 1774, to deliberate on taxation and other outrages suffered by the colonists. It is here that Patrick Henry's fiery eloquence gave the first stimulus for the War of the Revolution.

Walking two blocks south on Fourth Street we come to a site dedicated to the memory of two beautiful and sprightly American girls. Only a few steps, but no less than twenty years, separated them. In the stately mansion of Edward Shippen, Mayor of Philadelphia, his daughter Peggy met Benedict Arnold—a widower with three children, but a fascinating and famous man—and married him in 1779. She died an exile, wife of a traitor, twenty-five years later in London. Obliquely opposite, in the stately home of General Stephen Moylan, the Mistress Dorothea Payne Todd met James Madison, who later made her First Lady of the Land—while she made herself the much acclaimed Dolly Madison (an oasis, if you'll forgive the metaphor, in the desert of dull and unattractive First Ladies).

Walnut Street Gaol

Southeast corner of Sixth and Walnut streets is the site of the Walnut Street Gaol. It was used from 1775 to 1836. The sordid little wing which faced Locust Street served as debtors' prison. Here the great Robert Morris, patriotic financier of the War of the Revolution, was ignominiously imprisoned (for debts incurred in some private transaction) during three years in the late 1790's.

Washington Square, the block bordered by Walnut and Locust, Sixth and Seventh streets, used to be the Potter's Field. Hundreds of Revolutionary Soldiers are buried here, and countless victims of Philadelphia's yellow fever epidemics. On dark nights negro slaves used to gather amid the graves, to sing wild native songs and perform orgiastic African dances.

Another ancient burial place, romantic rather than melodramatic, is the Jewish Cemetery, at the corner of Spruce and Darien Streets, east of Ninth. The land was granted to the congregation of the Mikveh Israel Synagogue by John Penn in 1738. Here, near the entrance, is

the grave of one Rebecca Gratz—none other than Rebecca, the beautiful heroine of Scott's "Ivanhoe".

Pennsylvania Hospital

We make our last stop at Eighth and Pine streets, to visit the Pennsylvania Hospital. The land on which it stands was donated by William Penn, the hospital founded by Benjamin Franklin and Dr. Thomas Bond in 1751. The cornerstone with Franklin's quaint inscription, laid in 1755, can still be seen. Also the minute books which Franklin, as first secretary of the hospital, kept scrupulously, in his clear, fine handwriting. Here, in 1756, was the first clinical amphitheatre in America. In the grounds, fronting on Pine Street, stands a leaden statue of William Penn, donated by his grandson John Penn. Also, there stands a graceful elm tree, scion of the Penn Treaty Elm of Kensington. The Pennsylvania Hospital is the oldest hospital in the U. S.—and one of the most up to date.

Reservations Being Made

Because of the location of the meeting an unusually large attendance is expected. More than 200 reservations have already been made at the Ambassador Hotel, Atlantic City, N. J., where the meeting will be held on September 18th to 21st. Many are planning to arrive a day or two before the meeting to enjoy the many things that this great resort has to offer to vacationists. It is not necessary to be a member of the Technical Association to attend this meeting. Anyone interested in paper manufacture or sales in any form will be welcome.

Dr. Partridge at Hall Laboratories, Inc.

J. M. Hopwood, president, Hagan Corporation, Pittsburgh, Pa., has announced the appointment of Dr. Everett P. Partridge as director of research of Hall Laboratories, Inc., In this position, which he will assume on September 1, Dr. Partridge will be associated with Dr. Ralph E. Hall, the managing director of Hall Laboratories and his staff, with the scientific and technical specialists of Hagan Corporation, The Buromin Company, and Calgon, Inc., all of which are allied organizations, and also with the incumbents of the Industrial Fellowship on Calgonizing sustained by Calgon, Inc., at Mellon Institute of Industrial Research.

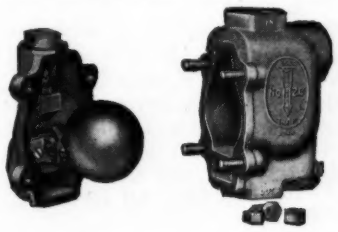
Dr. Partridge has distinguished himself during the past ten years by his researches on boiler-water problems. On completing his undergraduate course in chemical engineering at Syracuse University in 1925, he transferred to the University of Michigan, where—as Detroit Edison Fellow in chemical engineering under the direction of Professor Alfred H. White—he investigated the acid-treatment of zeolite-softened bicarbonate waters and the fundamental mechanism of boiler-scale formation, receiving the degrees of M.S.E. in 1926 and Ph.D. in 1928. At the conclusion of his graduate studies he was appointed associate editor of *Industrial and Engineering Chemistry*. While specializing in the study and reporting of industrial operations for this periodical, he also served on a part-time basis as research engineer of the Department of Engineering Research of the University of Michigan in connection with further studies of scale prevention, and prepared a monograph on the "Formation and Properties of Boiler Scale," which appeared in 1930 as bulletin 15 of this department. In the spring of 1931 he was appointed supervising engineer of the Non-metallic Minerals Experiment Station of the U. S. Bureau of Mines, maintained in cooperation with Rutgers University at New Brunswick, N. J. In this post he directed physico-chemical and chemical engineering research on the recovery of potassium salts and other industrial chemicals from polypalite; the use of different forms of calcium sulfate as retarders for portland cement; and other problems in the beneficiation and utilization of non-metallic minerals. Independently he collaborated with Dr. Hans Goldschmidt in translating from the German Dr. Alfred Schack's important work, which was published in 1933 as "Industrial Heat Transfer," by John Wiley and Sons. Dr. Partridge returned to active research on boiler-water problems in 1933 as a result of a movement initiated by Hall Laboratories and later taken up by the Joint Research Committee for Boiler Feed Water Studies, as a cooperative investigation by the American Society of Mechanical Engineers and the U. S. Bureau of Mines. This investigation is proceeding at the present time. Dr. Partridge is now publishing a critical study of the literature on embrittlement serially in *Metals and Alloys*.

In addition to the publications mentioned, Dr. Partridge has written some twenty papers for various scientific and technical journals. He is a member of the American Chemical Society, the American Institute of Chemical Engineers, Sigma Xi, Tau Beta Pi, Phi Kappa Phi, and Alpha Chi Sigma.

As director of research of Hall Laboratories, Dr. Partridge will continue his interest in boiler-water treatment and in the processing of water for general industrial use.

A New Steam Trap

The American District Steam Company, North Tonawanda, N. Y., is placing on the market a new steam trap—combination float and thermostatic type—which contains many outstanding features. Perhaps the most desirable from the operator's point of view is that the entire working mechanism is mounted on the cover, with all piping connections on the body. The cover and working mechanism may be removed for inspection and cleaning without disturbing the piping connections.



Other outstanding features are, reversible valve and seat, made of stainless alloy steel, making actually two traps available in one. If the valve and seat show signs of wear, it is the work of but a few minutes to reverse them and the equivalent of a new trap is obtained.

The ADSCO Vertical Steam Trap is a continuous flow type. A deep water seal prevents loss of steam. A limit stop on the float lever prevents the elevation of the float beyond normal—a sudden rush of condensate cannot damage the float by contact with the body.

This trap is furnished in six capacities at given pressures. Two of the models are arranged for either vertical or 90 degree inlet connections, while the third is provided for horizontal inlet and outlet connections from either side.

The smallest trap, weighing a little more than five pounds, is well adapted for installation with concealed and indirect radiation. It fits well within the small recess allotted to invisible radiation, and its vertical inlet and outlet connections on the same center line allow it to be revolved to any convenient position where the cover can be removed for inspection.

There is no corner, no location, no position where the mechanism of the ADSCO Vertical Steam Trap is not always accessible without disconnecting the piping.

Obituary

Frank Bicking

WEST CHESTER, Pa., August 12, 1935.—Frank S. Bicking, president of the S. Austin Bicking Paper Manufacturing Company, of Downingtown, passed away suddenly on Saturday, August 3, at his home, High and Sharpless streets, West Chester. He was aged 64.

For some years, Mr. Bicking conducted a paper mill in Bridgeport, and later was in business in Philadelphia. The family came to West Chester about twenty years ago.

In 1916, when the S. Austin Bicking Paper Manufacturing Company, in Downingtown, was incorporated, Mr. Bicking was made secretary and treasurer, which offices he held until the death of his brother, Joseph A. Bicking, four years ago, when he was made president. The business, a leading industry in Downingtown, had been established by his father more than fifty years ago.

Mr. Bicking was greatly interested in the civic life of West Chester, where he made his home, and of Downingtown, where his business interests were located. He had served as a member of the Borough Council in West Chester, being chairman of the Budget Committee during his entire term, and also in charge of the concreting of North High street in 1926.

In Downingtown he was chairman of the Board of the Kerr Memorial Park, in the development of which he took much pride.

He was a member of the Board of Governors of the West Chester Golf and Country Club, and a former President of the West Chester Club. He was a member of West Chester Lodge, No. 322, F. & A. M.

Mr. Bicking married Miss Alice McGibney, who survives, with these children: Mignon, wife of George T. Livingstone, York; Beatrice, wife of Thomas Thornton, Stroudsburg; Valeria, wife of Ralph H. Stover, Colwyn; S. Austin, Frank K. and John Frederick Bicking, at home. There are four grandchildren.

Two sisters, Mrs. Ida B. Moore, and Miss Hanna Bicking, and a brother, D. Park Bicking, all of Downingtown, also survive.

Charles M. Bullard

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., August 12, 1935.—Charles M. Bullard, of Appleton, Wis., who had been associated with the paper industry all his life, died August 8, at his home at the age of 65. He was an efficiency expert for mills from Coast to Coast for many years, and later built a paper mill at Vancouver, British Columbia. Of late years he had been selling mill equipment. Mr. Bullard was a thirty-second degree Mason, and the lodge had charge of his burial. The body was conveyed to his birthplace, Ausable Forks, N. Y., for interment.

Paper Products Completes Addition

DETROIT, Mich., August 12, 1935—The new addition to the Detroit Paper Products plant, which will be used to house the plastic compound division, has been completed, S. H. Franklin, president, announced last week. It will add 22,000 square feet of floor space to the factory.

Installation of machinery for manufacture of the new product has started. One press has been installed and three others, each capable of producing 2,000 pounds pressure to the square inch, will be in place in two weeks. The new presses will be the largest in the city. The new branch of the company's business will be in production about September 1, it is said.

Rhinelander to Retire Bonds

A refunding operation planned to substantially reduce interest charges has been announced by the Rhinelander Paper Company. The operation contemplates taking advantage of prevailing low money rates through borrowing a sum sufficient to retire all of the remaining outstanding mortgage bonds of the company.

By order of the Board of Directors, President Folke Becker has sent the following notice to the holders of the outstanding first mortgage 5½ per cent bonds, series of 1928 of the Rhinelander Paper Company, secured by first mortgage dated March 1, 1928 and supplement thereto dated June 1, 1934:

"Notice is hereby given to the holders of all of the outstanding bonds of the Rhinelander Paper Company of the issue known as 'First Mortgage 5½ Per Cent Serial Gold Bonds, Series of 1928,' secured by a first mortgage, dated March 1, 1928, and a supplement thereto dated June 12, 1934, wherein the Wisconsin Valley Trust Company of Wausau, Wis., is Trustee, of the election of the said Rhinelander Paper Company to redeem all of the outstanding bonds of said issue and series as provided in said first mortgage and the said supplement thereto. Payment of said bonds and each and all of them will be made at the office of the Wisconsin Valley Trust Company, Trustee, at the City of Wausau, Marathon County, Wis., and shall be of a sum sufficient to pay the principal, accrued interest and premium thereon, if any, all as provided in and by the said first mortgage indenture.

"Holders of said bonds are notified to present and deposit them at the office of the said Wisconsin Valley Trust Company, as trustee, on or before September 1, 1935, for payment on said last referred to date and that after the said 1st day of September, 1935, all interest on said bonds will cease."

Metallic Soaps—Their Uses and Properties

The Metasap Chemical Company, Inc., which is a subsidiary of the National Oil Products Company, Harrison, N. J., has just issued an interesting booklet entitled "Metallic Soaps—Their Uses and Properties." As paper manufacturers have recently shown considerable interest in metallic soaps, and as this publication is, as far as is known, the only one of its kind in the English language, it is felt that it would be specially interesting to members of the paper industry.

An explanation of what metallic soaps are, methods of manufacture, chemical and physical properties, methods of analysis and applications in various industries are among the topics discussed.

Copies of this booklet will be sent free of charge to interested persons upon request.

Mudge Paper Co. Has Outing

BALTIMORE, Md., August 12, 1935—On Saturday, July 27, the Mudge Paper Company held its fourth annual outing at Long Point on the Magothy River. Because of the company's rapid expansion in the past year, the outing drew together for first time the salesmen and employes from the York, Pa., Washington, D. C. and the Baltimore warehouses.

The activities included sailing, swimming, and a Soft-Ball game between the Baltimore employees and employees from the Washington and York branches. The Soft-ball game ended in a dead-lock.

Inasmuch as the competing teams could not decide whether a fly-ball in the woods was a home run or an out.

Indiana Paper Industry Optimistic

[FROM OUR REGULAR CORRESPONDENT]

INDIANAPOLIS, Ind., August 12, 1935.—In spite of the fact that this territory has sweltered in the longest heat wave of the year during the last two weeks, there is an undercurrent of optimism in the paper industry due largely to the volume of inquiries that are being received. The inquiries are not confined to any particular class of paper, but are spread over the entire market, giving rise to the opinion that business will pick up quickly once the approach of fall is certain. Local paper jobbers are hoping for a regular season for fall. There was no spring, winter emerging suddenly into summer and because of this a lot of direct mail matter for department stores and other seasonal advertisers was shelved.

The newsprint situation here is steady. Papers are carrying more business than they did a year ago and the business is coming from many more sources than it did at the same time last year. The large national advertisers are holding to their schedules and the local business has picked up. In the fine paper field, most of the business is for the old stand-by trade. Books, covers and fine papers are moving rather better than they were this time last year, in other words, the summer slump has not been such a slump. The approach of the new school year is bound to be felt toward the end of this month. Retailers did not have much carry-over stock this spring and it will be necessary for them to buy in considerable amounts before school starts. Inquiries already are coming in.

The container business is somewhat spotted. Demand in confined to a few lines but should broaden out during the end of this month. Box factories are working about 60 per cent of the time and most of the production is for merchandise already sold. Warehouse stocks are low and likely will be held to a low point. It is believed the automobile accessory plants, which have been poor purchasers for a month or more will get back into the market by the end of the month.

Paper stock men report a slightly increased mill demand, but are not satisfied with prices being offered.

Takes Over Clarence V. Shuttleworth, Inc.

Chas. H. Shuttleworth, formerly of Shuttleworth-Keiller & Co., Inc., 474 West Broadway, New York City, has recently taken over the business of Clarence V. Shuttleworth, Inc., located at 107 Barclay street, New York City. He will continue to do business under the name of the Shuttleworth Paper Company, Inc., and will specialize in vegetable parchment, krafts, fibers, poultry sacks, twines, peach and berry baskets, tills, containers, package handles, butter dishes, and egg boxes. The company will handle the products of Hollingsworth & Whitney Company, Union Bag and Paper Corporation, Kalamazoo Vegetable Parchment Company, Safepack Mills, Dolphin Jute Mills, and a number of other accounts.

Mr. Shuttleworth has his offices at 107 Barclay street, New York City, where he would like the opportunity of meeting his old friends and former business associates.

C. E. Jones Returns To Paper Company

Clayton E. Jones, formerly with the Ohio and Michigan Paper Company, Toledo, and more recently associated with the Petrequin Paper Company, Cleveland, has recently taken over the duties of the City Sales Desk of the Ohio and Michigan Paper Company.

Paper Demand Active in Philadelphia

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., August 12, 1935—A more than seasonal rise in business activity over the coming months is the forecast of the paper merchants here. It is pointed out that aside from the seasonal recession experienced during July, business has held up remarkably well in both fine and coarse divisions of the paper trade. There is virtually no change this week from that reported in the waste paper industry last week.

Paper Merchants, Inc., have just published a new sample book for distribution showing specimens of Perfection gummed papers. This is a very elaborate booklet and there has been considerable demand for it among the trade.

E. Latimer, Jr., 126 North 4th street, paper merchant and manufacturer of small roll products (die wiping, adding machine rolls, etc.) is enlarging his equipment to make decorative wrapping papers. The equipment includes a Schultz machine; production will start early in August.

Paper House of Pennsylvania, A. Hartung & Co., Raymond & McNutt, and Charles Beck Company, distributors for Strathmore papers, are showing Strathmore Thistlebloom, a novel and decorative paper which provides an effective decorative background for printing.

Through the courtesy of members of the Paper Trade Association of Philadelphia, the Graphic Arts Club has been given custody of the trophy which has been up for competition at the annual Paper Trade tournament each year since 1923. Possession of the "Paper Trade" Cup for one year, and a special prize will be awarded the member who makes the lowest net score at the October tournament at Aronimink. This is a fine trophy on which are already engraved the names of several golfers prominent in the industry in Philadelphia.

Gets Patent for Coating Paper

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, August 12, 1935.—Word received here this week was to the effect that a patent was granted on August 1 to William J. Montgomery, of Hamilton, for an apparatus for coating paper, differing in five separate ways from any similar device previously invented.

Mr. Montgomery's patent was issued under an application which he filed May 28, 1932. He has assigned his patent to the Champion Coated Paper Company of Hamilton.

To List Sutherland on N. Y. Exchange

KALAMAZOO, Mich., August 12, 1935—The Sutherland Paper Company of Kalamazoo has made an application to list its capital stock on the New York Stock Exchange, it was reported this last week and confirmed here by L. W. Sutherland, president. At present this would not affect the stock listings which the local paper company has on the Detroit Stock Exchange and the Chicago Stock Exchange, where the stock is currently quoted at 16½-17.

Alonzo Thomas Still Going Strong

Alonzo A. Thomas, the active Dean of Paper Salesmen, who completed his 62nd year with the Wilkinson-Gray Company on June 1, last, is spending his vacation at Pocono Manor, Pa., accompanied by his wife. Mr. Thomas is a frequent contributor to the *Pocono Manor Bulletin*. His most recently contribution, an "Ode to Gratitude," appeared on the front page of the *Bulletin*, in a box head.

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Shelton, Wash.—The Rainier Pulp and Paper Company has approved plans for new addition to mill, to be used primarily for laboratory service. It will be one-story, 46 x 172 feet, divided into a number of departments for testing, experimental work and other laboratory service. New unit will cost over $50,000, with equipment. General contract for superstructure has been awarded to S. S. Mullen, Port Angeles, Wash., and work will be placed under way at once. Company is also planning other expansion and improvements at mill, including a new digester building, caustic tank units and other work. Headquarters are at 343 Sansome street, San Francisco, Cal.

Washington, D. C.—The Columbia Specialty Paper Company, 228 First street, N. W., manufacturer of paper boxes and containers, has taken out a permit for new addition to plant, to be four-story, estimated to cost over $60,000, with equipment. General contract has been let to C. F. Gardner, Washington, and work will be placed under way at early date. A. J. Scullen, 1224 Lawrence street, N. E. Washington, is architect and engineer.

Detroit, Mich.—The Lynn Paper Products Manufacturing Company has been organized with capital of 200 shares of stock, no par value, to manufacture paper specialties. New company will take over and succeed to the Lynn Paper Products, with local plant at 1221 Beech street. Lloyd T. Chekley, Ford Building, Detroit, is one of the incorporators.

Chicago, Ill.—The Mid-West Gum Paper Company, 2423 South Damen avenue, will make improvements in plant. Plans have been filed for a new stack for boiler house service, for which general contract has been let to Louis Barsody, 140 South Dearborn street, Chicago.

Hudson Falls, N. Y.—The Blittersdorff Paper Box Company, Inc., has been organized with capital of 100 shares of stock, no par value, to operate a local plant for the manufacture of paper boxes and containers, including folding cartons. New company is headed by Oscar V. Blittersdorff, 5 Standard avenue, Glens Falls, N. Y. Charles L. and William C. Jordan, 109 Herald place, Syracuse, N. Y., paper box manufacturers, are interested in the new company.

Wausau, Wis.—The Minnesota Mining and Manufacturing Company, 791 Forest street, St. Paul, Minn., manufacturer of abrasive papers, sandpaper, etc., has awarded general contract to William M. Murphy & Son, New York Building, St. Paul, for improvements in certain buildings at raw material plant at Wausau, including roofing and other structural work. Toltz, King & Day, Inc., Pioneer Building, St. Paul, is architect.

Bedford, Va.—The Piedmont Label Company, manufacturer of paper specialties, is awarding miscellaneous contracts for new one-story addition to plant, recently referred to in these columns, including structural steel framing to the Virginia Bridge and Iron Company, Roanoke, Va.; plumbing to Moseley Brothers, Lynchburg, Va.; and electrical and heating work to a local contractor. The new unit will be one-story, estimated to cost close to $45,000, including equipment. As previously noted, general contract will be carried out by C. L. Lewis, Allied Arts Building, Lynchburg. Bryan & Terhune, 2 Rector street, New York, N. Y., are engineers.

Middletown, Ohio—The Fairbanks Fibre Box Company, Yankee road, manufacturer of fiber boxes and containers, is said to be completing plans for proposed new addition to plant, recently referred to in these columns, reported to cost in excess of $35,000, with equipment. Superstructure will be placed under way soon. Hillsmith & Company, 108 East Third street, Dayton, Ohio, are engineers, in charge.

Tampa, Fla.—The American Can Company, 230 Park avenue, New York, N. Y., manufacturer of paper and other containers, has approved plans for a new plant at First avenue and 22nd street, Tampa, where a tract of 20 acres of land will be used. Initial project will comprise six buildings, with main one-story manufacturing unit, 185 x 535 feet, to be equipped for large capacity; a one-story storage and distributing building, approximately of same size, will be constructed on adjoining site. Other structures will include an office building, garage and service unit for company trucks, and two smaller miscellaneous buildings. Entire project will cost about $260,000, including equipment. Contract for structural steel buildings has been awarded to the Jones & Laughlin Steel Corporation, Pittsburgh, Pa., and work will be placed under way at early date.

New Orleans, La.—The Great Southern Wirebound Box Company, Southport, New Orleans, has active work in progress for new one-story plant for the manufacture of corrugated fibreboard boxes and containers, a new line of output for the company, previously referred to in these columns. Miscellaneous building contracts are being let for the completion of the structure, including roofing to H. H. Robertson Company, New Orleans; and plumbing to the Lambert Plumbing & Heating Company, 408 Nashville avenue, New Orleans. Sprinkler system will be furnished and installed by the Texas Automatic Sprinkler Company, 446 St. Joseph street, New Orleans. The structure will be about 100 x 400 feet, and is estimated to cost about $200,000, with machinery. Lionel F. Favret, 937 Gravier street, New Orleans, is general building contractor. Diboll & Owen, Canal Bank Building, city, are architects, in charge.

Rio de Janeiro, Brazil—Compania Nitro Chemica Brasileira, Ltd., Rio de Janeiro, recently formed as a joint interest of Tubize Chatillon Corporation, 2 Park avenue, New York, N. Y., and Klabin, Irmaos & Company,

Ltd., Rio de Janeiro, and S. A. Fabrica Votorantim, Ltd., also of last noted place, has plans maturing for proposed new nito-cellulose rayon mill on site near Rio de Janeiro. Company will use a large part of equipment from plant of the Tubize Chatillon Corporation at Hopewell, Va., closed a number of months ago through labor difficulties, and work of dismantling and arranging for shipment is under way. The plant will consist of several large units, with power house, machine shop and other miscellaneous structures, and is estimated to cost in excess of $1,500,000, including machinery.

Cleveland, Ohio—The River Raisin Paper Company, Monroe, Mich., has arranged for lease of portion of former plant of Peerless Motor Car Company, Woodland avenue, S.E., and East 93rd street, Cleveland, totaling about 40,000 square feet of floor space, and will occupy at once for new paper converting and distributing plant. Property will be remodeled and equipment installed. The unit will be given over to the manufacture of corrugated paper cartons, cases, etc., with section reserved for storage and distribution of corrugated board products as produced at the Monroe mill, chipboard, fiberboard, etc. Machinery installation is estimated to cost close to $150,000. It is proposed to have the plant ready for initial service in September, when employment will be given to about 60 operatives; this number of workers will be doubled in the near future. James Hamilton, heretofore in charge of Cleveland office of company, will be manager at the new plant.

Passaic, N. J.—The Terminal Carton Corporation, Hackensack, N. J., manufacturer of paper containers, cartons, etc., has arranged for lease of portion of Building No. 1 of former mill of the Passaic Worsted Mills, Ninth street, Passaic, totaling about 25,000 square feet of floor space, and will occupy for new branch plant. Structure will be remodeled and improved, and equipment installed at early date. Employment will be given to large working force. A portion of the available space will be reserved for storage and distributing service.

Detroit, Mich.—The Detroit Paper Products Company, 5800 Domine street, manufacturer of corrugated boxes and containers, corrugated sheets, etc., is completing construction of new addition to plant, previously referred to in these columns, totaling about 22,000 square feet of floor area, and will occupy at once. Equipment will be installed to have unit ready for service early in September. New structure will be used primarily for plastic compound division and will represent an investment of more than $50,000, including machinery. S. H. Franklin is president.

Savannah, Ga.—The Union Bag and Paper Corporation, Woolworth Building, New York, N. Y., will construct a one-story plant unit at new local pulp and paper mill, Hermitage Plantation, for the manufacture of paste and adhesives, output to be used in the paper converting division of the mill. New unit will develop large capacity and material piped to the bag-making department. Company has active work in progress on main mill buildings, previously referred to in these columns. Entire project will cost approximately $4,000,000, including machinery. George F. Hardy, 309 Broadway, New York, is engineer.

Buffalo, N. Y. The Kieckhefer Container Company, West Canal street, Milkaukee, Wis., manufacturers of corrugated paper boxes and containers, has leased space in the Montgomery Building, 254 Court street, Buffalo, aggregating about 16,000 square feet of floor space, and will occupy at once for new branch manufacturing plant, making the twelfth such factory of the company in the United States. Machinery will be installed and unit placed in service at early date, with facilities to handle requirements for trade throughout this district. William A. Wurster is manager at Buffalo, and will be in charge of plant operations. Company is affiliated with the Eddy Paper Corporation, Three Rivers, Mich.

Dayton, Ohio—The Aetna Paper Company, 115 Columbia street, has completed plans and is asking bids for extensions and improvements in power plant, recently referred to in these columns. Work will include installation of three new 500-horsepower boiler units, stokers, boiler feed pumps and other equipment, and is estimated to cost close to $80,000. It is proposed to begin installation at early date. W. I. Barrows, Reibold Building, Dayton, is consulting engineer.

Hawkesbury, Ont.—The Canadian International Paper Company, Beaver Hall square, Montreal, Que., has plans maturing for new technical and research laboratory at mill at Hawkesbury and proposes to begin work on superstructure at early date. It will be three-story, 65 x 65 feet, estimated to cost over $50,000, with equipment. Company engineering department is in charge.

New Companies

Bridgeport, Conn.—The Equity Paper Company, Inc., has been organized with capital of $50,000, to deal in paper products of various kinds. The incorporators are Arnon D. Thomas, 36 Governor avenue, Milford, Conn.; and Stewart H. Jones, 89 Hartford turnpike, Hamden, Conn.

New York, N. Y.—The Continental Cellulose Corporation has been chartered with capital of 5000 shares of stock, no par value, to manufacture and deal in cellulose specialties, pulp and paper products. The incorporators include Michael J. Manton, 100-01 Stafford avenue, Forest Hills, N. Y.; and James J. Sullivan, 27 Eighty-sixth street, Brooklyn, N. Y.

Brooklyn, N. Y.—The Kyograph Transfer Paper Company, Inc., has been incorporated with capital of $1000, to manufacture and deal in special paper stocks. The incorporators are J. Frank Wiggin, 131 Joralemon street, and Harry Hogopain, 114 Clinton street, both Brooklyn.

Chicago, Ill.—Frank J. Wolf & Sons, Inc., 1633 Blue Island avenue, has been chartered with capital of 100 shares of stock, no par value, to deal in paper products of various kinds, cardboard stocks, etc. The incorporators are Frank J. Wolf, Sr. and Jr., and Otto C. Wolf.

Brooklyn, N. Y.—The Toga Paper Stock Company, Inc., has been incorporated with capital of 100 shares of stock, no par value, to deal in paper products of various kinds. Incorporators of new company include Bruno Caracchicolo, 542 Eleventh street, Brooklyn; and James L. Lepis, 89 Danforth avenue, Jersey City, N. J.

Wilmington, Del.—The North American Pulp and Paper Corporation has been chartered under direction of the Corporation Fiscal Company, Delaware Trust Building, Wilmington, with capital of $250,000, to manufacture pulp and paper products. The incorporators include D. B. and R. M. Hilliard.

Boston, Mass.—The Fiber Products, Inc., has been incorporated with capital of $20,000, to manufacture and deal in fiber products of various kinds. J. Harvey Estes is president; and Graydon Stetson, Marblehead, Mass., treasurer and representative.

New York, N. Y.—Tympan Paper, Inc., has been incorporated with capital of 100 shares of stock, no par value, to deal in paper goods of various kinds. The incorporators include Edward P. Shanley and John J. Dunne, 72 Wall street, New York.

Wilmington, Del.—The Lee Fibre Products Corporation has been incorporated under direction of the Colonial Charter Company, Ford Building, Wilmington, with capital of $200,000, to manufacture and deal in fiber products.

PAPER TRADE JOURNAL
ESTABLISHED 1872

15 West 47th St., New York, N. Y

Henry J. Berger
Editor

Ronald G. Macdonald
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Price, Per Copy, 10 Cents
United States, Per Annum, $4.00
Canada, including tax, $7.50; Foreign Countries in Postal Union, $6.00

Member Audit Bureau of Circulations

Vol. CI New York, August 15, 1935 No. 7

PAPER MEN URGED TO PROTEST LOAN BY RFC FOR NEW PAPER MILL

The reports widely circulated in the daily press that the Reconstruction Finance Corporation would make a loan of $4,000,000 to the Crossett Lumber Company of Crossett, Ark., for the erection of a mill to make paper from slash pine, appear to be misleading. The PAPER TRADE JOURNAL regrets that this report also was received by it from a usually reliable source in Washington and printed in its columns last week.

Late information on this matter makes it seem that the Crossett Lumber Company has applied to the Reconstruction Finance Corporation for the loan but that it has not as yet been definitely granted. This diminishes the prospects for the speedy erection of the mill. That the project will meet with strong opposition from influential sources is apparent from a letter which Mr. Charles W. Boyce, secretary of the American Paper and Pulp Association, has just addressed to the paper and pulp manufacturers, expressing grave apprehension of any such enterprise as the proposal, if completed, will lead to many similar applications which will result in the investment of large sums of public money in undertakings that will compete with mills privately owned and operated. Mr. Boyce, as the secretary of the American Paper and Pulp Association, urges paper and pulp manufacturers to protest against the granting of the loan, either directly to the Reconstruction Finance Corporation or through their senators or representatives in Congress. His statement follows:

"On August 2, 1935 the newspapers carried a press release from the Reconstruction Finance Corporation stating that arrangements had been made to loan $4,000,000 to the Crossett Lumber Company for the construction of a 100-ton kraft pulp and paper mill in Arkansas.

"In conference with RFC officials yesterday, it was learned that the loan had not been definitely made. The Crossett Lumber Company has applied for such a loan. The RFC have submitted a proposal to the company which, if accepted, will result in the loan.

"The paper and pulp industry has made every effort to discourage the lending of Government money for the construction of new paper-making capacity. Under the auspices of the American Paper and Pulp Association, manufacturers and staff appeared at hearings before the Public Works Administration and were able to defeat two proposals.

"A committee from the Association called upon Mr. Jesse H. Jones, chairman of the RFC, immediately after the new RFC Act was passed which authorized the loaning of money for such projects as the construction of paper and pulp mills. At that time no formal applications were before the board and although the board could not state its policies in respect to loans in the paper industry, the committee was assured that the industry could submit briefs and data in respect to any important proposals that the RFC might consider. The Crossett decision was made by the board without the knowledge of the industry; in fact no one in the industry knew that an application had been made.

"If this proposal is completed, it is likely to be followed by many applications of a similar nature which are likely to lead to the investment of large sums of public money in enterprises that will compete with those privately owned and operated. This precedent is viewed with apprehension by the industry and every effort is being made to get before the board of the RFC the true facts of the paper industry and especially the effect of an immediate expansion program upon the industry's welfare.

"In view of the fact that the influence of such a policy will reach every mill in the industry, it is important that each mill get protests before the RFC either directly or through their senators and representatives."

CURRENT UPSWING MOST ORTHODOX

Signs are constantly increasing of a considerable improvement in trade and industrial activity in the fall. The current movement is the third of important business upswings since the closing of the banks in March, 1933, and is by far the most encouraging and most orthodox of the three, according to M. D. Safanie, of the statistical department of Shearson, Hamill & Co., Wall Street brokers. Mr. Safanie supports this conclusion by saying that: "The former boomlets were based largely upon fears of possible consequences of monetary action, the effects of NRA upon wages and commodity prices, the speculative accumulations of inventories, actual and anticipated government expenditures and other artificial stimuli. The present movement had its origin in the restoration of business confidence by the important court decisions which have halted many of the New Deal programs. This was followed by a large volume of private financing as yet mainly for refunding purposes.

"The renewed confidence came at a time when inventories in general were at low levels and commodity prices were relatively stable. It found as has been the case for a number of years, a large latent demand for capital goods. None of the former boomlets stimulated the capital

goods industries as much as the current rise, and it has long been realized that without recovery in these industries, which furnish large numbers of people with work, no lasting recovery could take place.

"We now find the steel industry making rapid progress toward profitable operating levels, the machine-tool industry at 1929 levels, building making handsome gains, the electrical equipment and industrial-machinery business going steadily forward and the railroad-equipment field showing moderate improvement.

"Unlike the 1933 and 1934 recoveries the present phase is not creating an overbought condition as occurred in previous occasions in steel, cotton goods, bituminous coal, and so forth. This 1935 recovery stage has had no spectacular beginning as did the others, the rise was steady while stocks of manufactured goods were going down instead of up as they did in 1933 and 1934."

Paper Customs Cases

An important case involving the dutiability of newsprint paper has been decided by the United States Customs Court. The paper in question was imported from Japan at San Francisco, and used for the *Shopping News* of that city. It was classified for duty as printing paper, on the ground that it contained 30 per cent of bleached sulphite. The importer protested that it was standard newsprint duty free. The Customs Court upheld the Customs officials in classifying the paper for duty. The case arose in 1932, when the Japanese paper was delivered in San Francisco at $27 per ton. An effort to prove dumping was dropped because of the difficulty of learning Japanese production costs. The Customs officials then decided the paper was not standard newsprint, and this ruling has been upheld by the courts. The Import Committee of the American Paper Industry cooperated with both the Customs officials when the case was initiated, and later with the Department of Justice when the case came before the Customs Courts.

The Arkell Safety Bag Company has again taken to the United States Customs Court of Customs and Patents Appeals the question of the dutiable value of Swedish M. G. Kraft wrapping paper. This action is another step in the complaint made by the Import Committee in 1931 against the undervaluation of this paper. The United States Customs Court decided the paper was properly valued by the importers, but an appeal to the United States Court of Customs and Patents Appeals held the paper was heavily undervalued, and referred the case back to the lower court to find a proper value. The lower court then found a dutiable value higher than that originally fixed by the appraiser, and the importers now have appealed again on the ground that the lower court has no power to find a higher value than that fixed by the Customs officials. Since the case was initiated the importers have been forced to pay duty on the higher valuation, and will continue to pay this higher duty until a final decision is rendered.

St. Raymond Acquires New Pulp & Paper Co.

St. Raymond Paper Ltd., with head offices at 276 St. James street, West, Montreal, has taken over all the assets of the News Pulp and Paper Company, Ltd. These assets include a newsprint and ground wood mill at St. Raymond, Que., and a sulphite mill at Desbiens, Que.

Ohio To Eliminate Stream Pollution

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, August 12, 1935—Material steps were taken recently in the campaign to eliminate pollution in the Ohio river and its tributaries—streams that affect Miami Valley mill industries, when a luncheon meeting was held at the Hotel Gibson, at which city officials of Cincinnati and leaders in the Chamber of Commerce, including President William F. Wiley, publisher of the *Cincinnati Enquirer,* took part in the discussion.

Sanitary engineers of three states, with the promised cooperation of a fourth, got together for the first time to give pledges of cooperation. Representatives of the newly-formed Port Authority joined the visiting officials in declaring unequivocally that elimination of stream pollution was feasible, practical, and necessary to the conservation of public health.

It was pointed out that this could be accomplished through cooperation of the Public Works Administration on a pay-as-you-go basis—through a service charge that would make the project sef-liquidating.

Ohio, Kentucky and Indiana state health departments sent their representatives to the conference and it was stated West Virginia would send its officials at the next meeting. The Miami Valley always has been keenly interested in purifying its streams, and the paper mill owners have given their assistance in every possible way, even in the expenditure of substantial sums of money in installing equipment to take care of refuse liquors and wastes.

Lumber Operations in Adirondacks

[FROM OUR REGULAR CORRESPONDENT]

TUPPER LAKE, N. Y., August 12, 1935.—Several lumbering projects are under way by the Emporium Forestry Company in the Adirondacks which will produce about 3,250,000 feet of pulpwood which will be disposed of to paper mills in Northern New York. Among the largest projects is that in the Grasse River section near the town of Clare which is reached by a thirty-mile extension of the Grasse River Railway running through Conifer to Cranberry Lake. The jobbing camps established are employing large forces of lumberjacks and greater activity is seen in this region than has been witnessed in several years. A camp has also been made in the Childwold Park area near Massawepie Lake. About 6,000,000 feet of hardwood timber is also being cut by the company for other industries. It is also planned to cut a limited amount of hemlock for which a ready market has been provided within the past few years. Plans call for the cutting of the pulpwood before opening of the hardwood season.

To Sponsor Trade Practice Agreements

WASHINGTON, D. C., August 14, 1935.—The Federal Trade Commission has announced that the expanding and specialty paper products industry and the corrugated and solid fiber shipping containers industry have asked it to sponsor trade practice agreements for them, having completed all necessary preliminary arrangements looking to the negotiation of such agreements.

The Commission has announced that it will be glad to receive suggestions or representations, either in writing or in person, from any parties having an interest in these proposed agreements. It states that any such interested parties should make their views known to the Commission promptly, as the proposed agreements will be considered by the Commission at an early date.

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Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

TAPPI Preparing Construction Materials Monograph

In continuance of the policy of the Technical Association of the Pulp and Paper Industry to supply the industry with the most accurate and authoritative data on manufacturing requirements the Materials of Construction Committee of that organization has announced its intention to prepare a handbook or monograph covering the materials used for equipment and buildings used in the industry.

This announcement is published at this time to invite criticisms and suggestions and to have omissions brought to the attention of the committee. The chairman of the Materials of Construction Committee is James D. Miller, York Haven Paper Company, York Haven, Pa. He is being assisted by F. L. La Que, International Nickel Company, who is in charge of ferrous alloys; James T. Kemp, American Brass Company, who is in charge of non-ferrous alloys; J. W. Hemphill, Johns-Manville, who is in charge of non-metallic materials; and H. R. Hamilton, The Glidden Company, who is in charge of paints and protective coatings.

The following outline has been prepared by The Materials of Construction Committee of TAPPI for the benefit of the industry as a consumer of materials, and for the producers of materials for the industry. An approximation of service conditions is given, followed by a list of materials in current use or whose properties indicate them to be suitable for the particular service. The listing is subject to modification as experience indicates to be advisable.

General Construction Other Than Process Equipment

Scope: Covering mill buildings in part, steam plant and some accessory construction. Code designation when used refers to A.S.T.M. Standards, Parts 1 and 2 of 1933 edition.

ITEM 1.

Steel for buildings (A-9-33T).
Mild steel plates (A-10-33T).
Alloy steel for structural purposes (A-148-33T).
Zinc coating—(hot dip) on hardware and fastenings (A-153-33T).
W. I. rivets and rivet rounds (A-152-33T).
Building brick—concrete (C-55-33T).
Building brick—clay or shale (C-62-30).
Building brick—sand-lime (C-73-30).
Sewer brick—clay (C-32-24).
Paving brick (C-7-30).
Clay floor tile—structural (C-57-33T).
Clay tile—non load-bearing—structural (C-56-33T).
Clay wall tile—structural—load-bearing (C-34-33T).
Concrete masonry units—load-bearing (C-90-33T).
Natural cement (C-10-09).
Portland cement (C-9-30).
Concrete for pavements (D-366-33T).
Concrete—ready mixt (C-94-33T).
Clay sewer pipe (C-13-33T).
Keene's cement (C-61-30).
Partition tile or block gypsum (C-52-33T).
Plasters—gypsum (C-28-30).
Plasters—gypsum molding (C-59-30).
Sand for use in gypsum plaster (C-35-30).
Sewer pipe—cement—concrete (C-14-24).
Sewer pipe—clay (C-32-24).
Laying sewer pipe (C-12-19).
Wooden paving blocks—for exposed pavements (D-52-20).
Structural wood joists, planks, beams, stringers, posts, and timber (D-245-33T).
Timber and timber preservatives—Eighteen A.S.T.M. items.
Waterproofing and roofing materials—Nineteen A.S.T.M. items.

ITEM 2.—*Paints and Protective Coatings.* (P)

Service—Normal indoor and outdoor protection. Difficult conditions such as acid atmosphere of sulphite mills, hot surface of combustion chamber of acid mills, warm humid interior of machine rooms.

For Wood——— For Metal ——— Metallizing ———

ITEM 3.—*Water pipe and fittings.*

Service—May be classed as (a) in which requirements are normal and (b) in which iron contamination is to be minimized.

Steel—(F) C. I.—(F) W. I.—(F) 5 per cent Cr. steel—(F) antimony lead—(N) copper—(N) Brass—(N) nickel C. I.—(F)——Tellurium lead —(N).

ITEM 4.—*Steam plant.* (The T.A.P.P.I. Heat and Power Committee will supply this information.)

Service—Range from low pressure hand fired to modern.
High tensile strength carbon steel plate for pressure vessels (A-149-33T).
High tensile strength carbon steel plate for welded pressure vessels (A-150-33T).
High temperature heat insulation—refractories (C-93-33T).
Lap welded and seamless steel pipe for high temperatures (A-106-33T).
Clay fire-brick for stationary boiler service (C-64-28).
Clay refractories (C-27-28).

Process Equipment

ITEM 5.—*Wood chippers.*

Service—Severe mechanical wear on chipper throat and knives. Disc 84 to 122 inches dia. with steel ring shrunk to circumference, of cast iron about 4 inches thick, rotating about 225 r.p.m., vertically. Wood is fed down inclined cast iron spout, meeting four knives which are set on face of rotating disc. Wear at base of spout, designated throat, requires special attention.

Throat—hardened steel—(F), Hard-facing alloy—(F).
Knives—vanadium steel—(F).
Chip screen—carbon steel—(F).

ITEM 6.—*Acid making. (sulphite)*

Rotary sulphur burner—carbon steel (F).
Spray sulphur burner—(Texas Gulf—See 1935 Technical Association Papers.)
Service—System involves spray chamber operating to 2400 deg. F. with attached water-tube boiler for heat recovery.
Furnace walls—refractory brick.
Boiler tubes—carbon steel.
Hot Burner-gas Lines—
C. I.—(F) Ni. C. I.—(F), alloy steel (clad)—(F).
Cold Burner-gas Lines—
Sb. Pb.—(N), Te. Pb.—(N), alloy steel (clad)—(F).
Acid towers—wood—(NM), tile lined concrete—(NM).
Acid Pumps—Handling cold acid of 4.5-6.0 per cent SO_2 content.
Bronze—(N) Alloy Steel—
Acid Lines—antimony or tellurium lead—(N).

ITEM 7.—*Sulphite digesters.*

Service—Digester is carbon steel shell lined with acid proof material into which chips and acid are charged with temperature raised to maximum of 150 deg. C. Dimensions of large digester may be 15 feet diameter and 50 feet high, with conical top and bottom, producing about 20 tons of pulp per cook.
Digester Lining—
Silica brick—carbon brick—alloy steel—(F). Cement for brick—litharge and glycerine.
Digester relief lines and fittings—
Copper—(N) 27 per cent Cr. steel—(F) alloy steel—TAPPI Spec. E 400s.
Brass—(N)
Bronze—(N) alloy steel—27 per cent Cr. 4.5 per cent Ni, 1.5 per cent Mo.
Relief cooler—
Sb. or Te. lead—(N). Alloy Steel—(F).
Service—(Relief cooler)—To reduce temperature of sulphur dioxide saturated with water vapor and carrying some entrained organic matter from maximum digester temperature to atmospheric.
Digester stock blow-lines
Service—At completion of pulping the stock is blown from digester to blow tanks with perforated bottoms for removal of waste acid. These blow lines are usually castings of 6 to 12 inches diameter and will be in use two or three periods of ten to twenty minutes each per day depending on pulping schedule.
Bronze—(N)—Ni.-C. I.—(F). C. I.—(F).
Blow-tanks—yellow pine—(NM)—alloy steel—(duplex sheet).
Blow-tank bottoms—
Acid proof tile—(NM), alloy steel—(F).

ITEM 8.—*Stock lines.*

Service—Conveying stock at varying concentration as water suspensions and at varying acidity from slightly alkaline to a pH. as low as 4.2. In the fine paper field it is essential that iron contamination from stock-lines and other equipment be reduced to a minimum.
Wood—(NM), steel—(Spiral)—(F)—steel—(F).
Galvanized—(spiral)—(F), C. I.—(F)—cement lined—(NM).
Copper—(N), alloy steel—(F).
Stock pumps—c. i. case—(F), bronze rotor—(N).
Pulp screens—Bronze—(N). Chromium Plate—(N). Alloy Steel—(F). Monel Metal—K—(N).

ITEM 9.—*Stock preparation.*

Beaters—Service—Circulation of stock at pH. as low as 4.2 and temperatures to 40-50 deg. C. occasionally. C. I.—(F). Wood—(NM). Cement Lined—(NM).
Beater Bars—
Carbon Steel—(F), 14 per cent Cr. steel—(F) Bronze—(N).
Jordan Bars—Carbon steel—(F), Bronze—(N), 14 per cent Cr. steel—(F), Monel Metal—(N).
Liquid alum dissolving systems and distribution lines—lead—(N), hard rubber—(NM), 14 per cent Si. Iron—(F).

ITEM 10.—*Paper machine and accessories.*

Fourdrinier wires—phosphor bronze—(N), brass—(N).
Table Rolls—brass—(N), Alloy Steel—(F), rubber—(NM), Monel Metal—(N).
Driers—C. I.—(F), C. I. (Ni.)—(F), alloy steel—(F).
Calender Rolls—C. I.—(F), Ni. C. I.—(F), stainless-sleeve—(F).
Machine Hoods—MgO and asbestos—(NM).
Ventilation ducts and economizers—Copper—(N), Alloy Steel—(F), Non Metallic Composition—(NM).
Miscellaneous Small Parts—(Wet End)—Stainless Steel—(F), nitrided steel—(F).
Suction Box Covers—End-of-grain and straight maple—Synthetic Resins—(NM), Carbon—(NM), Cr. Plate—(N).

ITEM 11.—*Alkaline Pulping.*

Digesters—Service—Pulping is done by alkaline solutions which in the case of soda process will contain caustic soda from 11.5 to 12 Bé at 60 deg. C. and in kraft process 40 to 65 gms. per liter of caustic and 15 to 40 gms. per liter of sodium sulphide.
Shell—steel—(F) (welded).
Diffusers and causticizers—steel—(F), C. I.—(F).
Evaporators—steel—(F), C. I.—(F).
Evaporator tubes—steel—(F), Ni. and Monel—(N).
Filter wire—(following causticizing)—iron—(F), Monel—(N).
Recovery furnace lining—.
Service—Following the concentration of the waste

liquor from digestion, the organic material is burned in rotary or spray type furnaces, with temperatures reaching 2000 to 2400 deg. F. The high temperatures and content of sodium salts present a severe operating condition.

Soapstone—(NM), chrome brick—(NM), fireclay—(NM), Water-jacketted smelter body.

ITEM 12.—*Miscellaneous.*

Bleach plant—dry chlorine—steel—(F), C. I.—(F), *chlorine—water solution*—Durichlor—(F), hard rubber—(NM).

Bleach tanks—glazed tile—(NM).

Stock chests—

Service—The water suspensions of stock may also be at pH of 4.2. In case of fine papers where iron contamination is to be avoided, this element must be avoided on agitators etc.

Brick—(NM), tile—(NM), concrete—(NM), C. I.—(F), wood—(NM), synthetic resins, etc.—(NM), alloy steel—(F).

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Exhibition of Printing for Commerce

The American Institute of Graphic Arts is organizing its 12th Annual Exhibition of Printing for Commerce to open in New York City, in November, 1935.

The call for specimens will be mailed *early in September* to printers, typographers, engravers, advertising agencies, paper houses, etc., in the United States and Canada. All organizations and individuals interested, are invited to send to the Institute office, examples of their best work produced since September, 1934. The printed folder will give requirements.

The material for consideration will include all types of printed matter produced for sales purposes—booklets, folders, brochures, books for advertising, letterheads, calendars, business cards, labels, etc.

The American Institute of Graphic Arts is a national, non-profit, educational group whose membership is representative of every field of the graphic arts. It is the only national organization of its kind in the United States whose work is exclusively devoted to better taste in the graphic arts.

Current Research on Pulp and Paper in Government and University Laboratories of Canada

Clarence J. West[1]

The following study of current research on pulp and paper making in government and university laboratories in Canada supplements a similar study made for the United States which appeared in PAPER TRADE JOURNAL 100, No. 20:41-52 (May 16, 1935).

Only three institutions are represented in this compilation: Forest Products Laboratories of Canada; National Research Council of Canada; McGill University. Letters were addressed to the University of New Brunswick, Fredericton, N. B.; Queens University, Kingston, Ontario and the University of British Columbia; the lack of replies would indicate that no research was being conducted on pulp and paper at the present time. The Ontario Research Foundation, Toronto, Ontario, reported no research.

The compiler wishes to express his appreciation, as well as that of the Technical Association of the Pulp and Paper Industry of the United States, for the cordial cooperation of Dr. H. W. Johnston, Acting Director of the Division of Pulp and Paper of the Forest Products Laboratories of Canada, Dr. T. A. McElhanney, Superintendent of the Forest Products Laboratories, Dr. Harold Hibbert and Dr. George W. Scarth of McGill University and Dr. F. E. Lathe, Division of Research Information, National Research Council of Canada in making this study possible.

Forest Products Laboratories of Canada
Main Laboratories, Ottawa

PROJECT: Variability of wood.

INVESTIGATORS: J. D. Hale and J. B. Prince.

PURPOSE: To determine the extent and the causes of variation in density of wood with particular reference to the variation in mean density of a species in different localities, and to the range of variation of density within a species.

As the amount of dry pulp by weight obtainable from pulpwood is, within narrow limits, a definite percentage of the dry weight of the wood from which it was manufactured, measurement of the density of wood gives a direct indication of pulp yield. When more exact information is available it should be possible for the mills to plan the annual supply of pulpwood with better accuracy in respect to its yield and quality of pulp.

ACCOMPLISHMENTS: Test material was collected in 1934 from the Forest Experiment Station, Chalk River, from the Lower Gatineau region (Baskatong and Otter Lake) and from the Upper Gatineau—Lievre region (Parent), and shipped to the Laboratories for testing. A 1935 shipment has been obtained from Ontario just east of Lake Superior, and a Laboratories' representative is in the field obtaining other material.

WORK PLANNED: It is proposed to obtain samples of pulpwood from representative areas. By sampling comparable types at widely distributed points it will be possible to note whether there is any general trend of variation in density that is influenced by wide differences of latitude or longitude. From the data obtained by testing the samples it will be possible to show the mean density and the extent of variation from the mean in any units desired, probably in pounds of dry wood material per cubic foot as felled. It should be possible to show how the mean density of wood from any stand varies and whether the variation is affected by diameter, age, rate of growth, geographic range, general and specific types of stand or obscure site factors.

Such information may be expressed in a form which will be useful in making much more accurate estimates of the average density of wood in pulpwood stands than can be made at present. Provided this information is in a form readily applicable by woods operators (by reference to stand tables) to the various forest types in their respective districts, a close estimate of the average density of wood from each disrict or type may be made and better control obtained over the pulp-producing quality of the season's supply sent to the mill.

PROJECT: Measurement of cell dimensions of wood.

INVESTIGATORS: J. D. Hale and J. B. Prince.

PURPOSE: The object of this study is to note the significant dimensions of the cells and the relative proportion of springwood and summerwood in pulpwoods.

ACCOMPLISHMENTS: Measurements of cell dimensions have been made for the average quality of spruce.

WORK PLANNED: It is proposed to carry this further on material of low density, average density and high density.

PROJECT: Decay of pulpwood in block piles.

INVESTIGATORS: E. A. Atwell and Clara W. Fritz.

PURPOSE: The study of wood deterioration in block piles, since a very conservative estimate shows that the yearly loss to the industry through such deterioration is at least $5,000,000.

ACCOMPLISHMENTS: As a preliminary step in the investigation it was decided to make a study of 50 sticks of pulpwood to be furnished at the direction of the Chairman of the Pulpwood Committee. This wood, consisting of 25 sticks of 1928 and 25 of 1930 storage was received and studied during the winter of 1931-32. A careful estimate of advanced rot, incipient rot, and of sapwood stain gave the following results in percentage of the total amount of wood analysed:

	Advance Rot, Per cent	Incipient Rot, Per cent	Sapwood Per cent Stain
1928 wood	2.15	28.80	30.45
1930 wood	1.05	22.79	6.33

This shipment was practically all of spruce.

Collections of fruit-bodies and of rotted wood upon which they were growing were made from pulpwood stored in two yards in the vicinity of Ottawa; and collections were received from the yards of five plants of the Abitibi Power & Paper Company. *Lenzites saepiaria* was

[1] Member TAPPI; Chairman, Committee on Abstracts and Bibliography, TAPPI; Director, Research Information Service, National Research Council, Washington, D. C.

found to be the most prevalent species in stored pulpwood, but it is by no means the only fungus active in the piles. *Stereum sanguinolentum*, a fungus active in standing trees, was well represented in the collections; and several other fungi were obtained.

WORK PLANNED: Samples of pulpwood ready for storage in block piles or "corded" piles were examined in 1932 and placed in the piles, to be studied again when they are reached in the course of reclaiming the wood. Work is being continued on two sample lots on hand.

PROJECT: The chemical composition of Canadian woods.
INVESTIGATOR: F. G. Marriott.

PURPOSE: To obtain fundamental data regarding the chemical composition of certain Canadian woods of economic importance and to apply this data to the industrial evaluation of each species and to the development of new uses and new products.

ACCOMPLISHMENTS: All available literature on the chemical composition of wood, the analytical determination of the various constituents, etc., has been studied. A tentative work plan was prepared and is now being revised.

WORK PLANNED: To secure specimens of jack pine timber from a number of localities within its range, to sample this material and to determine its chemical composition. To study the application of the information obtained to questions of utilization.

Pulp and Paper Division, Montreal

H. W. Johnston, Acting-in-Charge, of this laboratory writes: "Our organization is, as you know, a unique one in which the Dominion Government and the Canadian Pulp and Paper Association cooperate in a joint research programme under Government supervision but with the general direction guided by the industry.

"Dr. Maass is retained by the Pulp and Paper Association and participates in the cooperative programme. The organization is rather loose and informal as is characteristic of many British institutions, yet works with considerable flexibility and has produced some results of interest."

PROJECT: Methods of analysis.
INVESTIGATOR: C. Alexander.

PURPOSE: The development, testing and recording of standard methods of analysis.

ACCOMPLISHMENTS: From time to time reports have been published under different headings describing various methods of testing in use at or investigated by the staff of the Pulp and Paper Division.

During the past year the following pieces of standard equipment have been installed and tested at the Division:

Pulp Fiber Classifier (Twin-Unit)	Johnston
Photopacimeter	Maass
External Area of Pulp	Maass
Small-scale Pulping—30 grams	Yorston
Laboratory Rod Mill—30 grams	Holland
Laboratory Rod Mill— 2 grams	Larocque
Kollergang	Clark
Stiffness Tester	Suvant
Smoothness Tester	Bekk

In addition to trials conducted with the above instruments, the following methods have been reduced to standard practice:

Lignin Estimation	Madison
Sulphur Estimation in Pulp	Wolesensky
Sulphite Liquor Analysis	Palmrose
Drainage Factor	W. B. Campbell
Contrast Ratio	Maass
Laboratory Beater Trial	Modified TAPPI

PROJECT: The absorption of alcohols on pulp.
INVESTIGATORS: W. B. Campbell and J. K. Russell.

PURPOSE: To discover the forces acting and the mechanism of their action when water is evaporated or otherwise removed from a sheet of wet pulp and thereby converted into a sheet of paper.

The strength and most of the other qualities of paper are due to the manner in which the fibers are bonded together during the drying process. Of course, the physical and chemical character of the fibers bound have large importance also, but in these studies the immediate concern is with the manner in which these qualities affect the bonding.

ACCOMPLISHMENTS: This series of investigations started in 1929. Work done at that time gave reason for believing that the generally accepted opinion that the bonding is due to "hydration" of the cellulose was largely a misconception. It was shown that the beating process, which increases the bonding effect, does not alter the degree of hydration. A new hypothesis was advanced at that time as a tentative explanation. As the views were almost entirely novel, the work attracted considerable attention among other workers in various foreign countries. Experimental work along analogous lines was carried on in several other laboratories, particularly in the Forest Products Laboratory at Madison, Wis., and the Institute of Paper Chemistry at Appleton, Wis. In order to avoid possibilities of error, the work was also repeated under improved conditions in the Forest Products Laboratories of Canada. In all cases the conclusions of these researches confirm the original work and are in accord with the hypothesis put forward.

In addition to the checking of the original work, the laboratory has carried out experiments to ascertain the effect of various conditions of water removal on pulps. The work most recently carried out has been concerned with the study of the relationship of various alcohols to cellulose pulps in order to throw light on the water relationships. Methyl alcohol is closely related to water, and its effect on pulp is close enough to that of water to be essentially similar but yet sufficiently different that important deductions can be drawn from the differences.

The sorption equilibria of methyl alcohol on groundwood, kraft and bleached sulphite have been determined. It was found in early work that a difficulty arose on account of mercury vapour and this was investigated. It was also found that even long continued high vacuum did not remove all alcohol from cellulose and the effect of temperature on the amount of methyl alcohol so retained was investigated.

The sorption equilibria of *n*-propyl alcohol on purified cotton and on bleached sulphite have been determined, starting with the samples in two different conditions, one where the water was removed by evaporation and the other where the water was removed by washing with liquid alcohol. From these experiments it was concluded that the main factors governing the amount of vapour sorbed by cellulose are the solubility effects of the sorbed liquid on the bonds of the cellulose gel structure and the effect of internal liquid tension in causing a compression of the gel structure during drying.

Experiments were also made to determine the effect of temperature on the water retained by cellulose against the dehydrating effect of phosphorus pentoxide which is, apart from cellulose, the most powerful dehydrating material known.

The conclusions reached as a consequence of the work with alcohol vapours led to the conception of a new hypothesis to account for the apparent loss of volume when cellulose is wet with water. The volume of cellulose differs

by about 3 percent according to whether the measurement is made in water or in organic liquids. The volume as measured in helium gas is in fair agreement with that in organic liquids. Several different hypotheses have been advanced to explain the discrepancy, the generally preferred one being that the water immediately in contact with the cellulose exists in a highly condensed form, some estimates showing a density as high as 2.6. From the work with alcohols it appeared possible that this apparent loss in volume might be accounted for by the presence of pockets or cavities in the structure of the cellulose. If these pockets are formed by the sealing off of small empty spaces during drying from water it may well be that the space sealed off is inaccessible to any fluid which does not have solvent action on cellulose.

All previously published determinations of the specific volume of cellulose in organic liquids or in gases have been based on the use of cellulose samples which were dried from water. According to our conception the volume as measured in water is the true volume because water, by dissolving the bonds which seal the cavities, can fill this space which would otherwise be empty. According to our ideas, also, the shrinkage forces necessary to produce the bonding which seals off these spaces do not exist except when liquid surfaces are present. Accordingly, if water is removed from wet cellulose by washing it away with alcohol instead of by evaporating it off, these empty pockets should not form. If the volume is then determined in alcohol it should be less than that found for the dried cellulose samples by the volume of the pockets. That is to say, the volume of the cellulose so treated should be the same in alcohol as in water. This experiment was made and it was found, as predicted, that the volume so determined was very close to the volume found in water. Volumes were determined in methyl alcohol, ethyl alcohol and benzol.

WORK PLANNED: It is not planned to do any further work on this problem as a laboratory project. The necessity of verifying the findings relative to specific volume has been recognized since all considerations of the relationship of water to cellulose must be based on the condition in which the water in immediate contact with the fibre exists. Further work in this direction is being taken up in the Department of Physical Chemistry of McGill University. While progress reports of all phases of this work have appeared in Quarterly Review, no paper has been published in a more formal way as yet. Preparation of such a paper in which the results as a whole will be presented is under way.

PROJECT: Classification of pulp by selective screening.

The mechanical difibration of wood, the refining of partially pulped wood and the beating of pulps cause the appearance of fibers of varying length, also fibre debris and in the case of mechanical pulps and pulps from the refining of partly disintegrated wood, there are present in the final pulp fibre bundles of great variability in size. The physical properties of these pulps depend in great measure on their percentage composition with respect to size and form of the various types of particle present. The quantitative separation of these types of particle would aid greatly in evaluating methods of refining and in control of mechanical pulping operations.

INVESTIGATOR: G. D. O. Jones.

PURPOSE: To evolve a standard apparatus for the classification of pulps by selective screening. To standardize a procedure for the use of this apparatus in the routine testing and examination of mechanical and other pulps.

ACCOMPLISHMENTS: A study was made of selective screening apparatus using pulsating diaphragms. This principle was abandoned. A new design of apparatus was evolved, in which the pulp suspension was made to flow at high velocity across a screen of known mesh openin At the same time a velocity at right angles was given to the particles by allowing a slow flow of water to take place through the screen. The result was to give to the pulp particles a high velocity sensibly parallel to the screen surface. This inhibited almost entirely the passage of oversize particles through the screen.

An examination was made of the physical properties of test sheets made from fractions of groundwood and sulphite pulps. The effect of beating coarse fractions was studied and the effect of various mixtures of sulphite and groundwood upon the resulting sheet properties.

The number of units required for successful classification of pulp has been reduced from five to two and the arrangement modified to provide a portable installation mounted on a small table. Considerable study has been made of different designs of unit, different arrangements of units, the effect of variations in contour and the dimensions of the prevailing type of unit and the manner of operating the classifier as a whole. As a consequence the proportions of operating conditions for successful operation are now established and several two unit instruments have been successfully built and operated at the Division.

The twin-unit pattern of pulp fiber classifier has definitely been standardized, preparatory to commercial distribution, and complete working drawings and a working model have been completed. The device has been protected by letters patent in Canada and in the United States and negotiations for manufacture and distribution under the auspices of the Canadian Pulp and Paper Research Corporation are in process of completion.

WORK PLANNED: It is proposed to conclude the original investigation by ascertaining what combinations of screens will be most useful for different types of pulp and paper making operations and to make photomicrographs and slides of typical pulps both beaten and unbeaten.

Further developments are contemplated in the direction of the commercial application of selective screening to pulp processing and will be commenced by the development of a laboratory apparatus capable of handling considerably larger samples of pulp.

PROJECT: Review of fiber staining technique.

INVESTIGATOR: G. J. C. Potter.

PURPOSE: To keep the records of the Laboratories up to date with respect to new methods and modifications of established methods for the identification and estimation of pulp fibres, the analyses of paper samples, etc.

ACCOMPLISHMENTS: The laboratory has not been actively engaged in the evolution of methods to be used in microscopic analysis. A method for the quantitative analysis of mixtures of soda and sulphite wood pulps has, however, been discovered by a member of the staff.

WORK PLANNED: A record will be kept of advances in this field made in other laboratories and published in the current literature.

PROJECT: Sulphite pulping studies.

INVESTIGATORS: F. H. Yorston and C. R. Mitchell.

PURPOSE: To investigate the effect of known variables in the sulphite cooking process.

ACCOMPLISHMENTS: An extensive study of the literature of sulphite pulping has been made. A technique has been developed for the determination of rates of pulping at substantially constant reagent concentration and under conditions such that the rate of penetration of liquor into the wood is not a factor. Data have been obtained on

the rate of pulping of fine sawdust from several species of wood and for spruce wood with liquors of different composition. Interpretation of the data is incomplete but it appears that the rate of pulping at any instant during the cook is partly but not entirely determined by the sulphonic acid content of the undissolved lignin.

The rate of delignification of wood in chip size was shown to follow the monomolecular relationship, provided a perfect penetration preceded the cook. A pre-treatment of the wood by heating in liquid water at 130 deg. C. was found to decrease the rate of delignification in subsequent cooking in sulphite liquor to an extent proportional to the time of pre-treatment. A blank experiment on preheating wood in the absence of water showed that such treatment did not affect subsequent delignification. Chips subjected to a definite preheating in water at 130°C. on subsequent cooking in sulphite liquor did not show a rate of delignification in agreement with the monomolecular law.

WORK PLANNED: To determine the effect of liquor composition and of pre-treatment of the wood on the rate of sulphonation of lignin and on the rate of solution of sulphonated lignin. To determine, if possible, the degree of sulphonation necessary for the complete cooking of any wood. To follow the changes taking place during sulphite cooking by means of vapor pressure and conductivity measurements under accurately controlled conditions. To determine the extent and mechanism of the formation of carbon dioxide during sulphite cooking.

PROJECT: Variables in groundwood process.

INVESTIGATORS: H. W. Johnston, W. B. Campbell and W. W. Holland.

PURPOSE: To study certain variables of groundwood operation.

To study the manner in which fibres are removed from wood by grinding and related processes for making mechanical wood pulp.

To study the energy consumed in making mechanical pulps and its relation to other factors which govern the sheet forming properties of such pulps.

ACCOMPLISHMENTS: Using the experimental grinder at the Pulp and Paper Division, mechanical pulps have been made at stone surface speeds of 5600 feet per minute with pressures as high as 50 pounds per square inch of pocket area. It has been found that pulps of any desired grade could be made at any combination of speed and pressure within the ranges examined, and that the horse power required for unit production depends only on the quality of the desired pulp, that production of pulp at a given quality is proportional to pocket pressure and surface speed and that duller surfaces are required at high speeds and pressures, rendering advisable the use of the finer sizes of grit in pulpstones. A few runs were made using a natural sandstone, the bulk of the work being carried out on an artificial pulpstone.

The semi-commercial grinding of pulp at the Division has been extended to cover a wide range of pressures and speeds and a cursory study has been made of the effects of stone surface, wood density and moisture content. Short studies were made using a variety of different species including birch, sitka spruce, western hemlock and Tasmanian eucalypts, the bulk of the work being conducted with moist, seasoned white spruce.

A cursory study was made of the manner in which fibers are removed by steel tools of different rake, clearance and shape and an attempt was made to estimate the actual temperature at the wood-stone interface by thermocouple measurements. These experiments form part of an investigation into the fundamental aspects of pulp grinding with special reference to energy consumption. This investigation was requested as a result of the interest awakened by the semi-commercial studies previously described.

A small experimental grinder of two square inches grinding surface has been designed and is nearing completion.

WORK PLANNED: It is proposed to study by means of the small grinder previously described the exact conditions of temperature, pressure and concentration which obtain between the wood and the stone and the nature of the heat path followed in the conversion of rotational energy into heat during grinding, in order to test the validity of certain hypothesis suggested by the work previously described. The primary object of the work is to ascertain whether the heat referred to plays a useful part in the grinding process and whether the operation of grinding mechanical pulp could be modified to advantage both as to the character of the pulps produced and the cost of conducting the operation.

It is likewise proposed to extend existing knowledge of the relative influence of such operating variables as speed, pressure, temperature, concentration, wood density, moisture, seasoning changes, frozen wood, stone composition and density and stone surface. By using a very small grinder the influence of wood variations can probably be eliminated.

PROJECT: Paper formation.

INVESTIGATOR: W. B. Campbell.

PURPOSE: To study the effect of various factors involved in the conversion of a suspension of papermaking fibers in water into a coherent sheet of paper. The phenomena involved include the tendency of fibers to bunch together or "clot" while in suspension, the effectiveness of various mechanical means of producing a uniform distribution of the fibers on the paper machine wire, the effectiveness and mode of operation of various means of removing water from the fibers at stages of concentration ranging from the dilute suspension at the flow-box to that existing in the dry sheet; the effect of forces tending to compact or otherwise alter the structure assumed by the fibers as deposited and the effect of passage of air through the wet sheet as in the action of suction boxes and couch. All of these actions are affected by the physical condition of the fibers.

ACCOMPLISHMENTS: A mathematical study has been made of the rate of free drainage of water from a dilute suspension of stock when on the wire screen of the British sheet machine and from this calculations have been made of the approximate effect of machine table rolls in removing water.

WORK PLANNED: It is planned to study the effect of different conditions of flow of the dilute suspension in breaking up or allowing the formation of clots of fibers under conditions approximating those which exist at the flow box and slice of a high speed machine. The method of attack contemplated involves the use of ultra high speed photography to examine the distribution of fibers in stock moving at speeds of around 20 feet per second. Active experimentation will depend on whether methods can be found to effect such high speed photography at a cost within the financial means of the laboratories.

PROJECT: Laboratory methods for beating pulps.

INVESTIGATOR: C. Alexander.

PURPOSE: To compare the relative merits of laboratory devices for beating and hydrating pulps.

ACCOMPLISHMENTS: The following devices for beating

laboratory pulps have been tested with a number of different sulphite pulps under strictly comparable conditions:

Apparatus	*Method*
Valley Iron Works Laboratory Beater	Modified TAPPI
Abbé Ball Mill	Alexander
Lampen Mill	
Laboratory Rod Mill	Holland

Pulps treated for different periods in the various devices were evaluated by means of the British Pulp Evaluation Apparatus, the Johnston Pulp Fibre Classifier, the Maass External Area of Pulp Method and the Maass Photopacimeter.

WORK PLANNED: It is proposed to compare the results obtained using the above devices with the action of the Clark Kollergang on the same pulps. The experimental results will then be tabulated and a final report prepared. In the event of a new device for beating and hydrating pulp becoming available, further work will be done on this project using one or more of the above instruments for comparison. If time permits the remaining portions of the above pulps will be retested to determine the effect of the storage.

PROJECT: Absorption of vapor by wood and pulps.
INVESTIGATORS: W. B. Campbell and O. Maass.
PURPOSE: To study the phenomena associated with the adsorption of vapors by wood and pulps.

A critical study of the literature will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: The adsorption and desorption of sulphur dioxide on wood and cotton cellulose has been measured.

WORK PLANNED: The adsorption of water on cellulosic material and a study of the relationship of this adsorption to the heat of wetting is contemplated. The adsorption of sulphur dioxide, ammonia and carbon dioxide on cellulosic materials containing various amounts of water is to be measured.

PROJECT: Adsorption of electrolytes by wood and pulps.
INVESTIGATORS: O. Maass and F. H. Yorston.
PURPOSE: To study the phenomena associated with the adsorption of electrolytes from solutions by wood and pulps.

A critical study of the literature will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: A few measurements have been made on the heat of adsorption of sodium hydroxide on standard cellulose.

WORK PLANNED: The heat of adsorption on a large variety of electrolytes on wood and pulp is to be measured by means of the adiabetic rotating calorimeter. Then adsorption isotherms are to be determined.

PROJECT: Heat of wetting by liquids of wood and pulps.
INVESTIGATORS: O. Maass and W. B. Campbell.
PURPOSE: To study phenomena associated with the heat of wetting by liquids of wood and pulps.

A critical study of the literature will be made forthwith in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: The heat of wetting of cellulose containing various amounts of water left by adsorption and description have been measured. The relation between the heat of adsorption of water on various pulps and their xanthate cuprammonium viscosities has been investigated. The heat of wetting of wood has been determined.

WORK PLANNED: The heat of wetting of cellulose by aqueous solutions of the alcohols is to be measured. The heat of wetting of wood and pulps by organic solvents is to be determined.

PROJECT: Surface area of pulps in suspension.
INVESTIGATORS: W. B. Campbell, H. W. Johnston and O. Maass.
PURPOSE: To study the influence of different environments upon the surface area of pulps in suspension. A critical study of the literature will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: A new apparatus has been developed for the determination of a surface area of pulps in suspension. A new technique has been investigated for the measurement of surface area by light reflected from a pulp suspension.

WORK PLANNED: The new area apparatus is to be used for the investigation of groundwood and other pulps to determine the relation between area and other pulp properties, to develop the area apparatus for commercial use, to further investigate the relation between area and light reflected from a pulp suspension and to use this as a means of determining the swelling of such suspensions, but produced by means of various reagents.

PROJECT: Optical properties of paper.
INVESTIGATORS: O. Maass, G. L. Larocque and J. Vivian.
PURPOSE: To study the reflection, absorption and transmission of light of different wave lengths exhibited by different types of paper.

ACCOMPLISHMENTS: An opacimeter has been developed by means of which a light transmitted by one and more sheets of paper can be accurately measured. Relationships have been deduced by means of which the fraction of light reflected and transmitted by a sheet of any thickness can be calculated from two measurements made with this instrument. The influence of beating, pressure of sheet formation and thickness on the opacity of paper has been determined.

WORK PLANNED: The development of an accurate opacimeter for commercial use. The investigation of the wave length of light, colour of the paper, nature of its composition, filler, classification, beating, etc., in relation to the optical properties of paper.

PROJECT: Dielectric constants of wood and pulps.
INVESTIGATORS: O. Maass and W. B. Campbell.
PURPOSE: To study the influence upon the dielectric constants of wood and pulp of moisture content, temperature, etc. A critical study of the literature will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: The dielectric constants of standard cellulose and cellulose containing various amounts of water have been measured and the dielectric constant of the adsorbed water calculated.

WORK PLANNED: To determine the dielectric constant of wood and pulps containing various amounts of adsorbed vapors. To develop a dielectric method for determining the amount of water in wood.

PROJECT: Equilibria existing in sulphite liquors.
INVESTIGATORS: O. Maass and F. H. Yorston.
PURPOSE: To study the influence of temperature concentration and the addition of reagents upon the equilibria existing in sulphite liquors. A critical study of the litera-

ture will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: The vapor pressures and conductivities of sulphite liquor over the concentration range 0 to 2.5 per cent calcium oxide and 0 to 7 per cent sulphur dioxide have been measured over the temperature range 25 to 130 deg. C. and the results tabulated. The nature of the equilibria existing under various conditions of concentration in temperature has been deduced. The precipitation temperatures over a large range of concentration have been measured.

WORK PLANNED: Gaps in the data on conductivities are to be filled. Further precipitation temperatures are to be measured. The influence of various reagents and of the presence of wood and cellulose on the equilibria are to be investigated.

PROJECT: Density of wood and pulps.

INVESTIGATORS: O. Maass and W. B. Campbell.

PURPOSE: To measure the density of wood and pulp and the influence of moisture content. A critical study of the literature will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: The densities of standard cellulose and of standard cellulose containing varying amounts of water have been measured.

WORK PLANNED: Further measurements of standard cellulose wood and pulps containing various amounts of adsorbed and desorbed vapors are to be made.

PROJECT: Penetration studies.

INVESTIGATORS: O. Maass and W. H. Johnston.

PURPOSE: To study the influence upon the natural and forced penetration of wood by fluids of such factors as shape of particles, temperature, pressure, concentration, etc.

A critical study of the literature will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: Nil.

WORK PLANNED: Work is contemplated on the forced penetration of various liquids and gaseous reagents into wood. The influence of species, wood structure and chip form on natural penetration is to be thoroughly investigated.

PROJECT: Printability of paper.

INVESTIGATORS: O. Maass, W. H. Johnston, W. B. Campbell, and G. L. Larocque.

PURPOSE: To study the printability of paper and the influence of types of pulp, methods of stuff preparation and additional ingredients in furnishes, conversion into paper, subsequent treatment and storage.

A critical study of the literature will be made forthwith, in order to ascertain what direction the investigation should take.

ACCOMPLISHMENTS: Nil.

WORK PLANNED: A precision proof press will be purchased and used to study the relative printing characteristics of a wide range of papers. The question of whether printability depends chiefly on the nature of the surface of fibres and the manner in which they are felted together in paper, or whether the whole body of the fibre influences the results, with special reference to the printability of papers made from esparto fibre and commercial sulphite pulps. The problems of "show through" and "strike through" in newsprint will be considered in relation to the influence of opacity, thickness, smoothness, etc. The relation between humidity, both relative and absolute, moisture content, expansion and the general physical characteristics of paper will be investigated.

PROJECT: Rate of deterioration in block piles.

INVESTIGATORS: F. H. Yorston and C. R. Mitchell.

PURPOSE: To determine the rate at which wood standing in block piles deteriorates in value as a raw material for pulp and paper.

ACCOMPLISHMENTS: The yield of pulp from wood stored for different periods of time has been determined. The loss of pulp yield due to decay of wood in river jams has also been studied. Evaluation has been made of drop in yield of certain logs.

WORK PLANNED: To cooperate with the Timber Pathology Division of the Laboratories in the estimation of the rate of decay of wood in block piles. To determine the loss in yield of chemical pulp in samples of wood affected to known degree by the various organisms which infect the wood.

National Research Council of Canada
Division of Chemistry, Ottawa, Canada

PROJECT: Use of potato starch in paper finishing.

INVESTIGATOR: W. Gallay.

PURPOSE: To determine the suitability of modified potato starch in tub- and machine-sizing.

ACCOMPLISHMENTS: The results to date have been promising.

SUPPORT: Government financial support. Laboratory and plant cooperation from the Forest Products Laboratories, Montreal, and from various pulp and paper mills.

PROJECT: Permanency of paper.

INVESTIGATOR: H. D. Chataway.

PURPOSE: To prepare specifications for paper for permanent Government records.

ACCOMPLISHMENTS: Considerable laboratory data have been secured.

WORK PLANNED: The work is to be continued by and in cooperation with the Forest Products Laboratories, Montreal, and various paper companies.

SUPPORT: Government funds.

PROJECT: Potato dextrins as adhesives.

INVESTIGATORS: W. Gallay and A. C. Bell.

PURPOSE: To prepare from potato starch dextrins suitable for use in paper for various purposes.

ACCOMPLISHMENTS: The work is in a very early stage.

WORK PLANNED: A study of the influence of the purity of the starch, the nature and amount of the acid, the temperature and the time of roasting on the quality of the dextrins produced. A study of methods of evaluating dextrins.

SUPPORT: Government funds. Plant and laboratory cooperation from industrial firms.

PROJECT: Clays as paper fillers.

INVESTIGATOR: W. Gallay.

PURPOSE: To determine the suitability of domestic clays.

ACCOMPLISHMENTS: The work is in a very early stage.

WORK PLANNED: Study of particle size, color, etc.

SUPPORT: Government funds. Cooperation of industrial firms in tests.

McGill University, Montreal, Canada
Division of Industrial and Cellulose Chemistry

PROJECT: Structure of lignin.

INVESTIGATORS: Dr. F. Brauns, Dr. G. Wright, and Messrs. Bell, Moore, White, Steeves, Leger, Lynn, Cramer, Swartz, and Dorman (Ph.D. theses).

PURPOSE: To determine the structure of lignin.

ACCOMPLISHMENTS: Lignin contains aromatic rings, in particular the vanillyl radical, but is essentially non-aromatic in character. For other details consult publications from this laboratory.

WORK PLANNED: Continuation of research on structure of lignin and its relation to the sulphite and kraft pulping processes; also with relation to the mechanism of bleaching.

FINANCIAL SUPPORT: University Professorship funds, some private funds and a limited Canadian Pulp and Paper Association grant.

PROJECT: Investigation of bacterial polysaccharides.
INVESTIGATOR: Miss Frances L. Fowler.
PURPOSE: Investigation of synthetic cellulose and other bacterial polysaccharides, mechanism of plant synthesis and role of bacterial polysaccharides in immunology.

ACCOMPLISHMENTS: A true synthetic cellulose has been made from a variety of sugars as well as from glycerol and other organic compounds. The building unit has been shown by Dr. Farr to be identical with that of the cellulose unit in the immature cotton fiber.

WORK PLANNED: Bearing of structure in relation to immunology; particle size and the relation to plant form.
FINANCIAL SUPPORT: Limited university support.

PROJECT: Nature of polymerization.
INVESTIGATOR: Mr. J. C. Pullman.
PURPOSE: Relation of viscosity to chain length.
ACCOMPLISHMENTS: Long chain polyethylene ether glycols with a molecular weight up to 7000 have been synthesized and their viscosities determined. The applicability of Staudinger's laws is being reviewed.
WORK PLANNED: None due to lack of funds.
FINANCIAL SUPPORT: Private.

Department of Botany

PROJECT: Sinkage studies.
INVESTIGATORS: G. W. Scarth, R. D. Gibbs and E. C. Jahn.
PURPOSE: To decrease loss of floated logs.
ACCOMPLISHMENTS: Seasonal changes in natural water contents of paper birch, poplar (*P. tremuloides*), balsam fir, jack pine and white spruce have been determined. The softwoods show very slight changes and there is no optimum cutting time for these trees (unless subsequent procedure be considered). Paper birch and poplar are driest in September. At this season the total water content may be about half that at time of leaf-opening (June). In the case of paper birch all parts of the wood carry water and show seasonal changes (though changes are much greater in the outer wood). In poplar only the sapwood shows seasonal changes. Attempts to change water contents by girdling (cutting out a ring of bark and sapwood) are successful in balsam and spruce, but of doubtful value. The absence of sap-heartwood differentiation in birch (which is the worst floater) renders girdling completely ineffective. Some experiments on seasoning and flotation indicate that "sour-felling" of birch is useful. The importance of end-penetration is brought out.

WORK PLANNED: Further work planned is largely of academic interest. It includes investigation of seasonal changes of water-content of Scots pine and larch in England, and of larch in the Province of Quebec. Food reserves of certain trees are also to be studied.

FINANCIAL SUPPORT: Grants from the Woodlands Section, Canadian Pulp and Paper Association, from the National Research Council of Canada and McGill University.

TAPPI Meeting To Be Largely Attended

More than two hundred paper mill engineers, chemists, superintendents and managers and representatives of allied industries, have already reserved rooms at the Ambassador Hotel, the headquarters for the Fall Meeting of the Technical Association of the Pulp and Paper Industry, which is to be held in Atlantic City, N. J. September 18 to 21, 1935. Those making early reservations are being assigned to the most desirable rooms with an ocean view.

LOW RAILROAD FARE

Low fares on the railroad have been made possible by excursion plans and by an arrangement made by the Technical Association to take advantage of the railroad certificate plan. Under this plan persons attending the meeting must ask for a Technical Association convention certificate when purchasing their tickets for Atlantic City. This certificate when validated at the Ambassador Hotel will entitle the bearer to purchase a return ticket for one third the regular fare. A person residing in Chicago could therefore attend the meeting and pay about $40 for transportation, exclusive of Pullmans. A railroad certificate should be requested irrespective of the distance to be traveled. Persons should inquire, when purchasing tickets, as to whether special excursion tickets would be cheaper than the fare under the certificate plan.

MILL VISITS AND HISTORICAL TRIPS

The tickets will be good for stop-over going to or from the meeting. It is planned by the Committee that mill visits will be conducted in Philadelphia to the Dill & Collins Inc. and Container Corporation plants, and at Wilmington, Del. where the laboratories of Du Pont and Hercules Powder Company will be visited.

GREAT GET-TOGETHER PLANNED

Plans have been made to have everyone arrive at the Ambassador by 6:00 p. m. Wednesday, September 18th, at which time there will be a dinner and a very elaborate program of entertainment. Special arrangements are being made to get everyone well acquainted before the meeting starts. For those who have never been to Atlantic City, this meeting will provide an opportunity worth taking.

Many are planning to include the TAPPI meeting in their vacations. Provision has been made at the Ambassador to allow those who attend the meeting to benefit by the low rates offered for several days before and after the meeting. There is so much to see at Atlantic City that those attending should plan to spend one or two days extra. The weather in September is usually delightful and ideal for vacationing. There is no better way to start the fall than by attending the TAPPI fall meeting, with its excellent technical papers, mill visits, speakers and recreational program. Persons not members of the Association will be welcome to attend the meeting. Now is the time to make hotel reservations.

E. T. Jones Leaves Stevens & Thompson

GREENWICH, N. Y., August 12, 1935.—Announcement is made here of the resignation of Edward T. Jones as general manager of the Stevens & Thompson Paper Company, after serving for twelve years in that capacity. His plans for the future are undetermined but it is understood that he will take a vacation before accepting a new post. His successor is John W. Bright who has already assumed his new duties. For the past several years the latter has served as purchasing agent and office manager and consequently is said to be well qualified for the managerial position.

Pulp and Paper Industry Literature Review

Abstracts of Articles and Patents Compiled by the Abstracts and Bibliography Committee of the Technical Association of the Pulp and Paper Industry, A. Papineau-Couture, John F. Ohlson, C. E. Peterson and Clarence J. West, Chairman

Copies of United States Patents can be obtained from the United States Patent Office, Washington, D. C., for 10 cents each. Send currency, not stamps.

Cellulose

Differentiation Between Cellulose-Destroying Fungi Parasitic on Paper. A. Sartory, R. Sartory, J. Meyer and H. Bäumli. Compt. Rend. 199:439-442 (1934).—*Cladosporium harbarum* was most active in decomposing cellulose when nitrogen was supplied as nitrate, *Aspergillus fumigatus* when nitrate or gelatin, and *Fusarium caeruleum* when peptone or gelatin was used. The addition of glucose to gelatin as source of nitrogen diminished the activity of the first two above-mentioned organisms, but increased that of the third.—A.P.-C.

Photochemical Reaction of Cellulose. I. Effect of Light on the Copper Number of Cellulose (Filter Paper). S. Oguri. J. Soc. Chem. Ind. Japan 37:201-202B (1934).—The copper number of filter paper is raised by exposure to sunlight or to the rays from a mercury-vapor lamp, but the effect is diminished by wetting with water or with aqueous caustic soda.—A.P.-C.

Questions Concerning Cellulose Chemistry. D. Kruger. Zellstoff u. Papier, 14, No. 12:485-86 (Dec., 1934).—Among the topics discussed, is the advantage of the ultracentrifugal method for the determination of the molecular weight of high molecular substances; such as molecular weights up to several million can be carried out with accuracy, much more dilute solutions can be used. The basis of this method is osmotic pressure.—J. F. O.

Concerning the Synthesis of Cellulose. Zellstoff u. Papier 14, No. 8:313 (August, 1934).—Cellulose is not a single material with a definite molecular weight, but there are several celluloses which differ from each other in their degree of polymerization. The degree of polymerization, that is the molecular weight, can be determined by measuring the viscosity in Schweizers reagent and substituting in a formula. This formula holds good for a wide range.—J. F. O.

Analysis of Swelling by Means of Moving Pictures. K. Hess. Papier-Fabr. 32, No. 6:61-67 (Feb. 11, 1934).—The article deals with the following: investigation of the cellulose fiber, observing the moving particles within the fiber, observations of the Brownian molecular movement within the fiber; investigation of starch granules and investigation of animal wool fibers.—J. F. O.

Quantitative Determination of Carboxyl Groups in Cellulose by Condumetric Titration. E. Schmidt, M. Hecker, W. Jandebeur and M. Atterer. Berichte Deut. chem. Gesellschaft 67, no. 12:2037-2049 (Dec. 5, 1934); Bull. Inst. Paper Chem. 5:117.—In a conductometric titration method for the measurement of the corboxyl group in cellulose and cellulose products, an excess of standard sodium hydroxide is added, and the mixture titrated with a standard hydrochloric acid solution. In the resulting conductivity curve, a nearly horizontal portion of minimum conduction results while the acid equivalent to the organic sodium salt being decomposed is added. There is no error due to alcoholic hydroxyl groups in the cellulose or to sodium hydroxide adsorption by the cellulose. The same method is applied to organic acids of high molecular weight with good results. Titrations of cellulose at 0° and 25° C. give identical results. The same carboxyl content (0.28 per cent) is found in original cotton fibers and in the cellulose removed from the cuprammonium solution. The authors worked with electrodialyzed cellulose and describe the method of electrodialysis used.—C. J. W.

Alkaline Processes

Utilization of Grapevine Branches in Paper Industry. V. A. Grabovskii. Central Sci. Research Inst. Paper Ind., Trans. 1933, No. 4:86-98 (in Russian); C. A. 28:7010.—The sulphate pulping of grapevine branches yield a good grade of wrapping paper and,when bleached, some standard grades of white paper.—C. J. W.

Production of Sodium Acetate and Kraft Pulp from Timber Fell Waste. L. P. Zherebov and M. N. Plungyanskaya. Trans. Central Inst. Sci. Research Forest Chem., Wood Hydrolysis 3:71-91 (1934) (in Russian); C. A. 28:7009.—Wood pulps were impregnated with dilute sodium hydroxide at 50° for 30 minutes and then steamed at 140-160° for one hour in an autoclave in the presence of a little water. With 4.5 percent sodium hydroxide pine produced six percent and leafy trees 6-8 percent acetic acid or twice the amount obtained by dry distillation. The wood residue is suited for pulp production.—C. J. W.

Pulping of Straw at Temperatures up to 100°. A. M. Rubekina-Goer. Central Sci. Research Inst. Paper Ind., Trans. 1933, No. 3:139-161 (in Russian); C. A. 28:7005.—Pulping of straw was carried on by single and by two-stage cooking at atmosphere pressure. In the two-stage process, the straw was first treated 4-120 hours at 15° and 1-3 hours at 60° with 8.5 parts of 20 percent solution of NaOH+Na_2S (in proportion of 1.25:1 to 2:1) with consumption of 7.5 percent, and then 15 days at 15° and 1-4 hours at 100° with 5-6 parts of 20 per cent NaOH+Na_2S with consumption of 12.5 percent of alkali. In the single stage pulping, with 20 percent alkali (12.5 percent NaOH and 7.5 percent Na_2S) at 100° for 3 hours, 48 percent pulp was obtained with 7-8 percent lignin, bleachable with a consumption of 10-12 percent of active chlorine and giving paper with a tensile strength of 6-8 km., stretch 3.5-5 percent and folding strength about 2000 folds. By the two-stage process 54 percent of slightly better bleachable pulp was obtained and paper similar to the single-stage process. Results are given for various other concentrations of alkali. Intermediate reworking of pulp in edge runners did not improve the bleaching properties. Of the three factors, the temperature, duration of cooking and the amount (concentration) of alkali, the temperature is the chief factor affecting the bleaching properties of pulp.—C. J. W.

Two-Stage Method of Straw Pulping. A. P. Petrov. Central Sci. Research Inst. Paper Ind. Trans. 1934, No. 1:111-147 (in Russian); C. A. 28:7006.—The results are given of laboratory and factory tests of two-stage pulping of rye straw by preliminary maceration and subsequent

steaming of the mass freed from the excess of alkaline liquor: With increased temperature during maceration the softness of finished pulp is increased, the best results being obtained by maceration for two hours at 60° and for one hour at 80°. Optimum conditions of cooking straw macerated six hours at room temperature of two hours at 60° or one hour at 80° are, resp., 2, 1:5 and 1 hour at 6 atmospheres pressure. The extraction is made with 7 parts (on air-dry straw) of 2.5 percent of active alkali (fresh NaOH or NaOH+Na_2S or causticized recovered melt). The consumption of alkali in the extraction is about 20 percent of air-dry straw. About 60-70 percent of liquor is removed after the extraction, containing about 35 percent of the free alkali. The spent liquors can be repeatedly used (about 8 times) with the addition of some fresh stock. The mean yield of extracted straw is 60-70 percent, depending on the conditions of maceration and that of cooked and bleached pulp 44 percent of shredded air-dry straw. The productivity of cooking units is increased 120 percent, the danger of overcooking is reduced and the resulting pulp is of uniform good quality for production of high-grade writing and printing paper. Pulping with NaOH+Na_2S is more active than with NaOH, producing a smaller yield of purer pulp (less lignin). The consumption of alkalies is equal to that of the common pulping. Circulation of alkaline liquor in the process of maceration is advisable for maintaining a uniform temperature. Substitution of steaming for cooking in the absence of sufficient volume of cooking liquor leads to excessive undercooking. Water washing of extracted straw is not absolutely necessary and is a cause of difficulties in the recovery of alkaline liquor. The use of phenol by-product sulphite in the multi-stage pulping is not practicable.—C. J. W.

Use of Seed-Flax Pulp in the Production of Fine Rag Paper. L. A. Kantor and M. P. Resh. Central Sci. Research Inst. Paper Ind. Trans., 1933, No. 4:169-191 (in Russian); C. A. 28:7006.—Experimental tests resulted in good grades of cigarette and transfer paper by substituting 25, 40 and 50 percent of seed flax pulp for rag stuff.—C. J. W.

Supplies and Economy of Seed-Flax Straw in Ukrania as a Raw Material for Paper Industry. V. Chuistov. Central Sci. Research Inst. Paper Ind., Trans., 1933, No. 4:191-219 (in Russian).—A discussion.—C. J. W.

The Ease of Beating of Certain Sulphate Pulps. Svensk Pappers-Tidn. 37, No. 22:719-722, 725 (Nov. 30, 1934); Bull. Inst. Paper Chem. 5:112.—A Geijer laboratory hollander was used in beating pulps prepared by laboratory and by industrial methods. The ease of beating depends primarily upon the degree of cooking which is designated by the Roe number. The better cooked the pulp, in other words, the lower the lignin content, the greater is the ease of beating. The second factor of importance is the nature of the wood. Pulps prepared from woods at various moisture contents were studied as were those prepared from mixtures of chips and saw mill waste.—C. J. W.

Mechanical-Chemical Method of Production of Rag Halfstuff from Seed-Flax Straw and from Common Flax Refuse Straw. L. A. Kantor and S. M. Ikhel'zon. Central Sci. Research Inst. Paper. Ind., Trans. 1934, No. 1:147-171 (in Russian); C. A. 28:7006.—Seed- and common-flax straws, dried to 5-7 percent moisture content, were subjected to a series of mechanical operations with the reduction of chaff to 6-7 and 5-6 percent, respectively, and a pulp yield of 24.5 percent of oven-dry straw. The products by two-stage pulping with 10 percent lime and 1-3 percent NaOH 1-2 hours at 0.8-0.9 atmosphere pressure and 6 hours at 3.5-4 atmospheres followed by beating to 35-40° Schopper-Riegler freeness and bleaching with 3-4 percent active chlorine, produced 14 g. transfer paper and in mixtures with 50 percent wood pulp a standard grade of cigarette paper. The mechanical and other properties of the papers are equal to those obtained from linen stuffs of the lower grades. Similar products were obtained from the straws containing 12 percent chaff by pulping 2-3 hours at 0.8-0.9 atmosphere pressure and then 8-9 hours at 4 atmospheres with 10 percent lime and 5 percent NaOH, followed by beating to 35-40° freeness and bleaching with 4 percent active chlorine.—C. J. W.

The Effect of Sodium Sulphide in the Causticizing Process. A. Linder. Svensk Pappers-Tidn. 37, no. 21: 687-688, 691-692 Nov. 15, 1934; Bull. Inst. Paper Chem. 5:112.—Pure solutions of sodium sulphide and sodium hydroxide at various concentrations were causticized, their behavior being compared with that of a sulphate liquor. Polysulphides appeared to have no effect on the causticizing process as to degree or to rate of settling. Sulphate liquor causticized at 60° C. gives a high percentage of conversion although the finished liquor settles poorly.—C. J. W.

Production of Rag Halfstuff and Paper from Flax Waste. A. Ya Goncharov. Bumazhnaya Prom. 13, No. 7:48-57 (1924); C. A. 29:339.—Flax waste cooked twelve hours at 3.5-4 atmospheres pressure with 15 per cent sodium hydroxide or sodium sulphide plus sodium hydroxide and bleached with a consumption of 8-10 per cent chlorine produced a satisfactory grade of cigarette and tracing papers.—C. J. W.

Reworking of Low-Grade Rags into Fine Papers. A. I. Lur'e. Bumazhnaya Prom. 13, no. 6:27-35 (1934); C. A. 29:339.—Low grade cellulose refuse, such as hemp rope, hemp-linen cords and nets, canvas, duck, etc., some were treated with pitch, tar or oil) was reworked into a halfstuff suitable for production of cigarette paper. The stuff was macerated three hours at 85° with three parts of 3.5 per cent sodium carbonate or 20 per cent of sodium hydroxide on weight of air-dry material and then cooked seven hours at four atmospheres with two parts of five percent sodium hydroxide.—C. J. W.

Recent Progress in the Manufacture of Pulp from Wheat Straw with Chlorine Gas. Pomilio patent. Pompeo Pizzini. Papier-Fabr. 32, no. 40: 417-19 (Oct. 7, 1934). Description of equipment and method of operation of a mill in Santiago, Chile, utilizing the Pomilio patent of manufacturing pulp from wheat straw with chlorine gas. The process is essentially a causticizing of the straw with weak caustic, washing with water, treatment of the straw with chlorine gas, washing and treatment with alkali finishing up with an additional wash or two. The process is continuous and all grades of paper can be made, from newsprint to fine papers.—J. F. O.

Continuous Two-Stage Cooking of Straw Pulp. N. A. Rosenberg. Zellstoff u. Papier 14, no. 7:277-80 (July, 1934). After giving the disadvantages of the one stage cooking, the author describes the continuous two-stage process. The disadvantages of the one stage cooking which are eliminated by the two-stage process are; the formation of carbohydrates which change over to a dark viscous material when cooked with alkali at 100°, organic materials present increases the consumption of cooking alkali at the higher temperatures, and finally there is an increase in the consistency of the cooking liquor in the one-stage process which becomes more difficult to wash from the straw pulp.—J. F. O.

Developments in Processing of Resinous Wood Waste. R. C. Palmer. Chem. Met. Eng. 41:456-460 (1934).—A brief review of some of the recent chemical and engineering developments in the processing of the raw material, together with references to various patents relating thereto.—A. P.-C.

Production of Wood Cellulose Comparable to Cotton and With High Alpha-Cellulose Content. Francesco C. Palazzo and Fortunato Palazzo. U. S. pat. 1,981,323 (Nov. 20, 1934).—Wood pulp is treated in an autoclave with a liquor containing 1 to 1.2 per cent of caustic soda and 0.2 to 0.3 percent of colloidal sodium salts of the emulsoid class (*e. g.*, sodium soaps of higher fatty acids) stable with respect to alkalies, at a pressure of 1 to 2 atmospheres and for a period of 1 to 2 hours.—A. P.-C.

Production of Wood Pulp. Forestal Land, Timber and Railways Co., Ltd., A. Fontana, R. O. Phillips and E. H. W. Rottsieper. Brit. pat. 409,081 (Dec. 31, 1932).—Hard woods (wattle, maple, etc.) are impregnated with caustic soda (up to 10 per cent solution) at 10° to 30°C., the vessel being alternately evacuated and opened to atmospheric pressure to obtain complete penetration of the liquor. The wood is subsequently heated with sulphurous acid at 120° to 150°C., sufficient being added to convert the alkali into a mixture containing equal proportions of monsulphite and bisulphite and having a pH of 5.5 to 7.—A. P.-C.

Manufacture of Paper. Mead Corp. Brit. pat. 416,814 (Sept. 21, 1933).—Lime containing approximately 85 per cent of available calcium oxide is slaked at a concentration of 24 percent with cold water and rapidly agitated for 15 min. A 24 per cent solution of sodium carbonate as leach liquor, obtained by the recovery of spent caustic cooking liquors, is slowly added at about 80°C. and then boiled for 15 min. The mixture is filtered and the calcium carbonate sludge produced again similarly treated with a 19 per cent carbonate liquor, the liquor after reaction being adjusted to 80 per cent causticity by addition of sodium carbonate. The sludge is screened (through 200-mesh), filtered and washed. It is claimed that a fine white sludge is thus produced which may be used as a pigment or filler.—A. P.-C.

Continuous Treatment of Vegetable Materials with Soda and Gaseous Chlorine for the Industrial Production of Cellulose. U. Pomilio. Brit. pat. 415, 224, (May 22, 1933).—The minced material while descending a first tower by gravity is treated with dilute alkaline liquor admitted at the top and with steam rising from a convenient point in the tower. It is then treated in a second tower with chlorine in countercurrent.—A. P.-C.

Treatment of Lignocellulosic Material and Products Obtained Therefrom. H. Dreyfus. Brit. pat. 414,751 (Feb. 8, 1933).—Wood chips are treated with dilute alkali (not more than 4 per cent caustic soda or caustic potash) at 100° to 140°C. under pressure followed by concentrated alkali (10 to 20 per cent) at room temperature. After washing, the pulp may be bleached with chlorine, when it is suitable for production of esters or ethers.

Process for the Manufacture of Paper Pulp, Particularly from Grasses and the Like. Richard S. Hilpert. Fr. pat. 769,180.—Straw or similar raw material is cooked in a sodium sulphite liquor to which is added caustic soda or lime in amount not exceeding one half the equivalent of the soda combined as sulphite.—A. P.-C.

Manufacture of a Purified Cellulose. I. G. Farbenindustrie A. G. Brit. pat. 410,005 (Oct. 7, 1933).—Moist cellulose pulp obtained by any opening-up process is treated with chlorine, washed with very dilute alkali, and then further treated with aqueous caustic soda (at 5 to 10 per cent) with simultaneous introduction of chlorine at not less than room temperature.—A. P.-C.

Production of Paper Pulp. The Forestal Land, Timber & Railways Co., Ltd., Alberto Fontana, Ralph O. Phillips and Ernst H. W. Rottsieper. Brit. pat. 409,081 (April 26, 1934).—Preferably hardwood, *e. g.*, wattle, maple, chestnut, in the form of chips or relatively small pieces, is impregnated with an aqueous solution of alkali at or slightly above room temperature, then heated with an approximately neutral mixture of sulphites and bisulphites, preferably of pH 5.5 to 7.5, and finally, after washing, submitted to mechanical disintegration and hydration.—A.P.-C.

Utilization of Black Liquors. Georges Honoré Dupont and Jean F. X. de Fayard. Fr. pat. 765,513.—Black liquors from the soda or sulphate pulping of wood are used for the pulping of straws or grasses.—A.P.-C.

Production of Cellulose. José Sala. Fr. pat. 763,906, (May 9, 1934).—An alpha-cellulose suitable making cellulose esters is made from bamboo canes by drying the canes in the open for several days, washing in water for 7 to 15 days, disintegrating to form a sort of tow, cooking in an autoclave with a dilute alkaline lye, washing, heating to about 156°C. under pressure in water containing 45 g. caustic alkali, 20 g. sodium sulphide and 5 g. sodium sulphite per liter, and sufficient guaiacol. The pulp is washed with an emulsion of benzene in water. The pulp is oxidized with sodium hypochlorite, washed, treated with hydrofluoric acid and washed again.—A.P.-C.

Pulp of High Alpha-Cellulose Content. I. G. Farbenindustrie A. G. Brit. pat. 410,005 (May 10, 1934).—An opened up moist cellulose material, such as beech chemical pulp, is treated with chlorine, and caustic alkali is then added to form in the pulp a liquor of 5 to 10 per cent strength while simultaneously introducing gaseous chlorine into the mixture.—A.P.-C.

Chlorination of Wood Pulp. J. Sousedik. Belg. pat. 401,741 (April 30, 1934).—Pulp is treated with a supersaturated chlorine solution.—A.P.-C.

The recovery of the Liquor in the Manufacture of Sulphate Pulp with Special Reference to the Wagner Process. Hubert Kienzl. Papier-Fabr. 31, No. 11:131-34 (March 12, 1933).—Description, operating data and advantages for the Wagner process are given after a short introduction on the recovery of the liquor in the manufacture of sulphate pulp.—J.F.O.

The Development of Various Purification Processes for Raw Sulphate Rosin Soap. Ewald Pyhala. Zellstoff U. Papier 14, No. 7; 273-76 (July, 1934).—The excellent foam producing quality and great cleansing action, together with the fact that there is available about 100,000 tons, has induced many investigators to develop processes for the utilization of this sulphate rosin soap. The rosin soap consists of about 50 per cent fatty acids and 50 per cent resinic acids. The fatty acids are principally oleic and linolenic acids and the resinic acids, abietic and oxy-resin acids. The author describes processes already in use at different mills and then discusses fully his patented process for the manufacture of rosin soap.—J.F.O.

Process for the Manufacture of Material from Pine Oil for Floor and Wall Covering. Deutsche Lineoleumwerke A. G., Berlin. Swed. pat. 80,570 (Feb. 8, 1932).—The pine oil separating out as a by-product in the manufacture of sulphate pulp is used wholly or partially as a substitute for the usual starting product (drying oil and rosin). The pine oil is mixed with a siccative at high temperatures and is oxydized by blowing air through it, then after the addition of fillers and color the resulting product

is brought into the desired form by pressing or rolling—J.F.O.

Recent Trends in Black Liquor Evaporator Design. W. T. Hinckley, PAPER TRADE J. 100, No. 2: 36-40 (Jan. 10, 1935).—A review of evaporation practice in alkaline pulping mills, describing the various types of evaporators, their merits and shortcomings, and drawing particular attention to the need for low cost corrosion resistant materials of construction for evaporators.—A.P.-C.

Feeding Black Liquor to a Smelting Furnace. Alfred G. Kernin to Mosinee Paper Mills Co. U. S. pat. 1,985,504 (Dec. 25, 1934).—Black liquor is fed into a smelting furnace by means of compressed air to which has been added the required amount of sodium sulphate to make up for soda losses.—A.P.-C.

Recovery of Organic Constituents from Black Liquor. Ralph H. McKee. Fr. pat. 766,005 (June 20, 1934).—Concentrated black liquor is heated with caustic potash, the resulting mass is dissolved in water and sodium oxalate is crystallized and filtered out of the solution, the filtrate being then treated with oxalic acid to form potassium acid oxalate, which is recovered.—A.P.-C.

Treatment of Black Liquor. Bror N. Segerfelt. Fr. pat. 764,937 (May 30, 1934).—The dry solids obtained from back liquor are passed through a gas producer and the slag falls through the hearth into water to produce steam which is used in the combustion zone of the producer, while the gas is used to evaporate more liquor.—A.P.-C.

Treatment of Residual Liquors from Sodium Sulphite Processes. Linn Bradley and Edward P. McKeefe assignors to Bradley-McKeefe Corp. U. S. pat. 1,983,789 (Dec. 11, 1934).—The invention provides for the following steps in the recovery of spent liquor from sodium sulphite cooks: (*a*) passing the spent liquor through hot furnace gases thereby evaporating water, cooling the gases and recovering a portion of the oxy-sulphur constituents carried by the gases; (*b*) introducing into a furnace organic matter and sodium-oxy-sulphur compounds that were contained in the spent liquor, burning the organic matter to produce heat, recovering soda and sulphur as sodium carbonate and sodium sulphide, and producing hot furnace gases that carry oxy-sulphur constituents including sulphur dioxide; (*c*) dissolving the solid residue to produce an alkaline solution containing the recovered sodium carbonate and sodium sulphide; (*d*, treating this alkaline solution with solid sodium bicarbonate obtained in step (*h*) in amount sufficient to convert the sodium sulphide into sodium carbonate; (*e*) removing hydrogen sulphide from the solution; (*f*) burning the hydrogen sulphide to sulphur dioxide; (*g*) sulphiting the solution resulting from (*d*) and (*e*) at a temperature below 60°C. to produce sodium sulphite and sodium bicarbonate in the solution; (*h*) separating the precipitated sodium bicarbonate from the solution; (*i*) recovering sulphur dioxide produced by (*f*) and sulphur dioxide carried by the furnace gases after (*a*), and combining it with sodium carbonate contained in the liquor resulting from (*d*) and (*e*); and (*j*) using the recovered sulphur dioxide in the form of sodium sulphite cooking liquor to digest cellulosic raw material.—A.P.-C.

Process for the Removal of the Evil Smelling Materials from the Aqueous Condensate and Solutions in the Sulphate Pulp Process. H. Berstrom & K. Cederquist, Stockholm. Swed. pat. 80,421 (March 5, 1930).—The condensate is led through a tower, column or wash apparatus with packing material where it comes in contact with the action of air or flue gases or a mixture of both.—J.F.O.

Sulphite Process

Utilization of Limestones in Sulphite Pulping. L. L. Kágan and E. V. Lipshitz. Central Sci. Research Inst. Paper Ind. Trans. 1934, No. 1: 11-26 (in Russian); C. A. 28:7007.—C.J.W.

A Quick Method of Determination of the Usefulness of Limestones for Production of Calcium Bisulphite Solutions by the Tower Method. O. K. Giller. Central Sci Research Inst. Paper Ind. Trans. 1934, No. 1:27-34 (in Russian); C. A. 27:7007.—The testing of several local grades of limestones is based on the Rommler method. A sample contained in a glass cylinder was soaked for 24 hours at 16° with three percent aqueous sulphur dioxide or for six hours with circulation. The difference in weight of the limestone before and after sulphur dioxide treatment and the percentage of calcium bisulphite in solution and of calcium sulphite and calcium sulphate in the sludge indicates the quality of limestone for production of sulphite cooking acid by the tower method. The observation that some grade of limestone catalyze the oxidation of sulphur dioxide to sulphur trioxide with an excessive formation of calcium sulphate requires further study—C. J. W.

Settling Vats for Sulphite Cooking Acid. K. V. Khodakov. Bumazhnaya Prom. 13, No. 6:58-60 (1934); C. A. 29:338.—A system of settling vats (illustrated) for the separation of resinous matter cymene) from the solution of blow off gases is described.—C. J. W.

Litharge-Glycerol Cement for Use in Equipment for Sulphite Pulping. B. V. Lopatin and A. O. Geller. Bumazhnaya Prom. 13, No. 6:20 (1934); C. A. 29:338.—The American practice of using litharge-glycerol cement mixed with powdered glass, quartz, andesite, etc., is discussed.—C. J. W.

Acid-Resisting Cement and Its Use in Sulphite Pulping. .B. V. Lopatin. Bumazhnaya Prom. 13, No. 7:30-32 (1934).—C. J. W.

Heat Balance Between Hot Acid Accumulators and the Boiler Plant of a Sulphite Mill. J. Kuusinen and I. Kjellman. Pappers-Trävarutid. Finland 16, No, 20: 838, 840, 842-844 (Oct. 31, 1934); Bull. Inst. Paper Chem. 5, 106.—The article tends to show that, if peak loads at the beginning of quick cooks are avoided, smaller and less expensive boiler units can be used. In order to prevent an increase of the heating period with consequent decrease in production, larger hot acid accumulators must be installed. An example is given to show the savings effected when a correct balance between the size of the accumulator and the boiler plant is obtained.—C. J. W.

The Texas Gulf Sulphur Company Spray Type Sulphur Burner. O. Kress, W. H. Swanson, D. C. Porter and B. F. Smith. Paper Trade J. 99, No. 17:48-51 (Oct. 25, 1934).—A description of the construction and operation of the Texas Gulf spray type sulphur burner in the mill of the Kimberly Clark Corp., together with data on the waste heat boiler installation.—A.P.-C.

A Mill Test for the Exact Determination of Combined Sulphur Dioxide. G. V. Palmrose. Paper Trade J. 100, No. 3:38-39 (Jan. 17, 1935).—A method using potassium iodate in the presence of the iodide ion has been developed for determining the combined sulphur dioxide to within 0.01 percent, making a correction for reversible sulphur dioxide.

What Can We Expect from the Circulation of Liquor in the Sulphite Process? Karl Ehninger. Papier-Fabr. 31, No. 35:461-66 (Aug. 27, 1933).—The author first reviews the important facts and comparisons between the Mitscherlich cook and the "quick" cook, and then shows the advantages in the use of liquor and gas circulation as used in certain methods whereby there is an improvement in yield, quality, and lower consumption of steam and raw materials.—J. F. O.

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Treetex Corp., Kungsholm, Gothenburg, 1949 bdls.; —, Rydboholm, Wifstavarf, 111 bdls., 16 cs.

NEWS PRINT

N. Y. Evening Journal, Markland, Liverpool, N. S., 342 rolls; N. Y. Tribune, Markland, Liverpool, N. S., 1164 rolls; N. Y. World Telegram, Markland, Liverpool, N. S., 609 rolls; Bridgeport Herald, Markland, Liverpool, N. S., 54 rolls; Gilman Paper Co., Markland, Liverpool, N. S., 249 rolls; Clinton Paper Corp., Markland, Liverpool, N. S., 58 rolls; Jay Madden Corp., Pr. Roosevelt, Hamburg, 130 rolls; Bank of Montreal, Humberarm, Cornerbrook, 2792 rolls; International Paper Co., Humberarm, Dalhousie, 5741 rolls; ——, Bergensfjord, Oslo, 213 rolls; Parsons & Whittemore, Inc., Manhattan, Hamburg, 200 rolls; Jay Madden Corp., Manhattan, Hamburg, 73 rolls; Brooklyn Daily Times, Kungsholm, Gothenburg, 327 rolls; Parsons & Whittemore, Inc., Kungsholm, Gothenburg, 21 bls.; Jay Madden Corp., New York, Bremen, 132 rolls; Walker Goulard Plehn Co., New York, Bremen, 51 bls.; American Paper Exports, Inc., Nordhval, Three Rivers, 433 rolls; ——, Nordhval, Montreal, 540 bls.

PRINTING PAPER

G. J. Fijux, Pr. Roosevelt, Hamburg, 100 rolls; Japan Paper Co., Manhattan, Hamburg, 3 cs.; Steiner Paper Corp., Bloomersdyk, Rotterdam, 45 cs.; Japan Paper Co., Bloomersdyk, Rotterdam, 4 cs.; E. Dietzgen & Co., New York, Hamburg, 13 cs.; E. Dietzgen & Co., New York, Bremen, 13 cs.

WRAPPING PAPER

National Pulp & Paper Co., Inc., Kungsholm, Gothenburg, 2196 rolls, 281 bls.; S. S. Kresge, McKeesport, Havre, 4 cs.;——, New York, Hamburg, 8 bls.

FILTER PAPER

H. Reeve Angel & Co., Inc., Georgic, London, 9 cs.; H. Reeve Angel & Co., Inc., Majestic, Southampton, 15 cs.; A. W. Fenton, Inc., New York, Hamburg, 100 bls.

SURFACE COATED PAPER

Hensel Bruckman & Lorbacher, Pr. Roosevelt, Hamburg, 4 cs.

METAL COATED PAPER

K. Pauli Co., New York, Bremen, 17 cs.

PHOTO PAPER

J. J. Gavin, Majestic, Southampton, 1 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Samaria, Liverpool, 12 cs. (duplex).

DECALCOMANIAS

Phoenix Shipping Co., New York, Hamburg, 1 cs.; Sellers Transportation Co., New York, Hamburg, 17 cs.

TRANSFER PICTURES

Manhattan Decalcomania Co., New York, Bremen, 4 cs.

TISSUE PAPER

W. J. Byrnes, Georgic, London, 1 cs.; W. J. Byrnes, Majestic, Southampton, 2 cs.; W. J. Byrnes, Samaria, Liverpool, 1 cs.

TRACING CLOTH PAPER

C. Bruning, Pr. Roosevelt, Hamburg, 37 cs.

PAPER TAPE

R. C. A. Communications, Inc., American Trader, London, 3 cs.; ——, New York, Hamburg, 10 ctns., 22 cs.

COLORED PAPER

C. H. Asche, H. Jaspar, Antwerp, 15 cs.; International F'd'g Co., New York, Hamburg, 14 cs.

CARD BOARD

Thomas & Pierson, Georgic, London, 17 cs.

OPTICAL PAPER

Selsi Co., Ile de France, Havre, 6 cs.

ENVELOPES

Japan Paper Co., Manhattan, Hamburg, 12 cs.

MISCELLANEOUS PAPER

R. J. Saunders, Inc., Majestic, Southampton, 5 cs.: ——, Hokkai Maru, Yokohama, 7 cs.; M. M. Cohen, Kungsholm, Gothenburg, 61 rolls, 40 bls.; Lunham & Reeve, Inc., Kungsholm, Gothenburg, 171 bls, 127 rolls; National Paper & Pulp Co., Inc., Kungsholm, Gothenburg, 547 rolls, 1192 bdls.; The Borregaard Co., Inc., Kungsholm, Gothenburg, 947 rolls, 104 bls.; F. L. Kramer & Co., Kungsholm, Gothenburg, 126 rolls; Kraemer & Co., Kungsholm, Gothenburg, 180 bls.; ——, Kungsholm,

Gothenburg, 72 rolls; E. H. Sargent Co., Kungsholm, Gothenburg, 12 cs.; Steiner Paper Corp., New York, Bremen, 12 cs; Titan Shipping Co., New York, Bremen, 3 cs.

RAGS, BAGGINGS, ETC.

Jaffe Products Co., Orizaba, Havana, 43 bls. rags; Amtorg Trading Corp., Dmitrov, Leningrad, 997 bls. rags, 2096 bls. flax waste; Manufacturers Trust Co., Hokkai Maru, Osaka, 100 bls. cotton waste; E. J. Keller Co., Inc., Exochorda, ——, 81 bls. paper stock, 85 bls. bagging; Bank of N. Y. Trust Co., California, Glasgow, 23 bls. paper stock; ——, California, Glasgow, 56 bls. bagging; A. W. Fenton, Inc., Clairton, Manchester, 10 bls. rags; ——, New York, Hamburg, 200 bls. cotton waste; ——, New York, Hamburg, 100 bls. rags; N. Schwab & Sons, Inc., Black Eagle, Antwerp, 67 bls. cotton waste; ——, Exchange, Barcelona, 211 bls. bagging; Banco Coml. Italiane Trust Co., Exchange, Barcelona, 127 bls. rags; E. J. Keller Co., Inc., Exchange, ——, 290 bls. rags; J. Levy & Sons, Oriente, Havana, 15 bls. rags; E. J. Keller Co., Inc., Estrella, ——, 135 bls. bagging; E. J. Keller Co., Inc., Manhattan, ——, 16 bls. paper stock.

HIDE GLUE

——, New York, Hamburg, 100 bags.

OLD ROPE

——, Georgic, London, 85 coils; Chase National Bank, Black Hawk, Rotterdam, 42 coils; Banco Coml. Italiane Trust Co., Bloomersdyk, Rotterdam, 133 coils.

WOOD PULP BOARDS

Salwen Paper Co., Kungsholm, Gothenburg, 7 cs.

WOOD PULP

M. Sone, Pr. Roosevelt, Hamburg, 1168 bls. wood pulp, 181 tons; ——, Pr. Roosevelt, Hamburg, 278 bls. wood pulp; The Borregaard Co., Inc., Bergensfjord, Sarpsborg, 840 bls. sulphate; ——, Bergensfjord, Sarpsborg, 1050 bls. sulphite; Irving Trust Co., Bergensfjord, Oslo, 880 bls. mechanical pulp; E. M. Sergeant Pulp & Chemical Co., Bergensfjord, Oslo, 150 bls. chemical pulp; ——, Manhattan, Hamburg, 361 bls. wood pulp, 38 tons; M. Sone, Manhattan, Hamburg, 672 bls. wood pulp, 101 tons; Halifax Power & Pulp Co., Jan Sheet Harbor, 11,133 bls. ground pulp; Johaneson Wales & Sparre, Inc., Kungsholm, Gothenburg, 748 bls. kraft soda pulp; Gottesman & Co., Inc., Rydboholm, Wifstavarf, 125 bls. sulphate; Perkins Goodwin & Co., Rydboholm, Wifstavarf, 600 bls. sulphate, 1350 bls. sulphite; M. Sone, Cliffwood, Helsingfors, 250 bls. woodpulp; M. Sone, Cliffwood, Stocka, 2420 bls. wood pulp.

NEWARK IMPORTS

WEEK ENDING AUGUST 10, 1935

H. G. Craig Co., Inc., Donnacona I, Donnacona, 554 rolls news print; H. G. Craig Co., Inc., Donpaco, Donnacona, 307 rolls news print.

BOSTON IMPORTS

WEEK ENDING AUGUST 10, 1935

F. S. Webster Co., Samaria, Liverpool, 13 cs. tissue paper; G. F. Malcolm, Inc., Samaria, Liverpool, 22 cs. tissue paper; ——, Black Eagle, Antwerp, 26 bls. rags; ——, Black Eagle, Antwerp, 29 cs. parchment paper; E. Butterworth & Co., Inc., Black Eagle, Antwerp, 77 bls. bagging; Royal Manfg. Co., Black Eagle, Antwerp, 61 bls. cotton waste; E. J. Keller Co., Inc., Black Eagle, ——, 18 bls. bagging; Gottesman & Co., Inc., Rydboholm, Sweden, 940 bls. wood pulp; M. Sone, Rydboholm, Gothenburg, 406 bls. wood pulp; M. Sone, Schwarzwald, Hamburg, 332 bls. wood pulp; E. J. Keller Co., Inc., Schwarzwald, ——, 67 bls. bagging; E. J. Keller Co., Inc., Collingsworth, ——, 67 bls. paper stock.

NEW LONDON IMPORTS

WEEK ENDING AUGUST 10, 1935

Gottesman & Co., Inc., Heddernheim, Sweden, 2000 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING AUGUST 10, 1935

——, Exochorda, Alexandria, 68 bls. rags; A. W. Fenton, Inc., Clairton, Manchester, 30 bls. rags; Philadelphia Natl. Bank, Clairton, Liverpool, 133 bls. bagging; Art Importing Co., McKeesport, Havre, 2 cs. paper; Banco Coml. Italiane Trust Co., McKeesport, Havre, 101 bls. rags; G. W. Millar & Co., McKeesport, Havre, 107 bls. rags; Castle & Overton, Inc., McKeesport, Havre, 681 bls. rags; De Dio Bros., McKeesport, Havre, 19 bls. rags; ——, Capulin, London, 160 coils old rope; ——, Capulin, Hamburg, 169 bls. wood pulp, 25 tons; Jay Madden Corp., Capulin, Hamburg, 77 bbls paper; American Sanitary Rag Co., Black Eagle, Antwerp, 54 bls. rags; M. Friedman, Black Eagle, Antwerp, 30 bls. rags; Chase National Bank, Black Eagle, Antwerp, 46 bls. rags; ——, Exchange, Barcelona, 171 rolls old rope.

BALTIMORE IMPORTS

WEEK ENDING AUGUST 10, 1935

Congoleum Nairn Co., Black Hawk, Rotterdam, 379 bls. rags; ——, Clairton, Manchester, 9 bls. rags; ——, Nordhval, Port Alfred, 4501 rolls, 433 bls. news print.

NORFOLK IMPORTS

WEEK ENDING AUGUST 10, 1935

M. Sone, City of Norfolk, Hamburg, 300 bls. wood pulp.

MONTREAL IMPORTS

WEEK ENDING AUGUST 10, 1935

Gottesman & Co., Inc., Vasaholm, Sweden, 12,625 bls. wood pulp.

Chile Increases Paper Production

Production of paper and paper products in Chile has made notable progress during the past three years. Prior to 1931, over 70 per cent of the paper requirements were imported. Today the industry has an invested capital of 24,000,000 pesos and its plants produce newsprint, writing, wrapping papers, cardboard, pasteboard, and strawboard. The quality of the domestic product is not equal to the imported article, but it is being rapidly improved and the eventual elimination of all foreign imports excepting specialized products is expected. Of the 18 mills, four manufacture boards as well as paper. Production of writing and wrapping papers reached a total of 17,786 metric tons in 1933. Imports of paper products, in the meantime have declined from a value of 15,000,000 pesos in 1931 to only 5,000,000 pesos in 1932. Exports of paper are negligible.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, August 14, 1935.

Although the local paper market is rather quiet, demand for the various standard grades of paper is more persistent than in the corresponding period last year. Sales forces of the leading paper organizations anticipate a busy time during the closing months of the year. Prices are generally holding to former levels.

The newsprint paper market is moderately active. Manufacturing operations in the United States, Canada and Newfoundland are proceeding in sufficient volume to take care of current requirements and stocks at the mills are not excessive. While the price situation remains unchanged, sentiment is improving somewhat.

Steadiness prevails in the fine paper market. There are a number of inquiries around for book, cover, writing and ledger papers, which should materialize into good orders. Prices are holding to schedule. Tissues are going forward in good volume. The coarse paper market is displaying strength and summer specialties continue firm.

Mechanical Pulp

The ground wood pulp market continues listless. Production of mechanical pulp, however, both in the United States, Canada and abroad, is practically keyed to consumption, and the statistical position of the industry is fairly sound. Prices of all grades are holding to formerly quoted levels, in most instances.

Chemical Pulp

Conditions in the chemical pulp market are considered satisfactory. Demand for the various domestic and foreign grades is well sustained for the time of year. Kraft pulp continues firm, with offerings limited. Bleached sulphite pulp is strong, while other grades are also holding up well.

Old Rope and Bagging

The old rope market is dull. Paper mill demand for both foreign and domestic old manila rope is restricted. Small mixed rope is moving slowly. Old rope prices remain unchanged. The bagging market is exhibiting a strong undertone. Gunny and scrap bagging are steady, while roofing bagging is in brisk request.

Rags

Paper mill interest in the domestic rag market is more in evidence. Demand for new cotton rags is fairly active. The various grades of shirt cuttings are stronger, especially No. 1 white shirt cuttings, silesias and fancy shirt cuttings. The imported rag market is also showing some signs of improvement.

Waste Paper

The paper stock market is steadier. Board mill demand for the lower grades is slightly better and quotations on strictly folded news and No. 1 mixed papers are more stable. The higher grades of waste paper are marking time. Prices have held up well for some time past and the outlook for the future is promising.

Twine

Most of the business transacted in the local twine market during the past week was along routine lines. Demand for the various varieties is fairly satisfactory for the season. The outlook for Autumn is considered bright, in most quarters. Prices are generally holding to formerly quoted levels.

German Paper Exports Rise

Exports of paper and board and manufactures from Germany during the first 5 months of the current year totaled 149,487 metric tons as against 108,305 metric tons during the corresponding period last year. Among the more important items were: boards, amounting to 34,052 tons; printing papers, 40,717 tons; wrapping and packing papers, exclusive of tissue and greaseproof papers, 27,630 tons; fancy colored and coated papers, 9,787 tons; and writing papers, 2,403 tons. All of these items show an increase compared with the corresponding period last year, except boards which dropped off 483 tons. Printing papers, which consist mostly of newsprint, are larger by 47 per cent, wrapping and packing papers by 22 per cent, fancy colored and coated by 29 per cent, and writing papers by 90 per cent.

Middlesex Paper Tube Co. Expands

LOWELL, Mass., August 12, 1935—Expansion of the Middlesex Paper Tube Company was officially announced today by Sam Porton, president of the firm. The plant is moving its machinery to the buildings of the former Shaw Hosiery Co. in Chelmsford street and by Labor day will triple the total number of its workers. One feature of the expansion program is the opening of a paper box-making department.

K. V. P. To Retire Bonds

KALAMAZOO, Mich., August 12, 1935—The Kalamazoo Vegetable Parchment Company will retire a block of the A series of bonds due in 1938, totaling $281,000, as of September 1, it was decided at a recent board meeting. This action, with the retirement of $450,000 of this series previously, will remove the A series from circulation, leaving only the B series outstanding.

Gray's Harbor Shows Increase

The Gray's Harbor Pulp and Paper Company reports as follows for the year ended on April 30: Net income after expenses, taxes, depreciation and other charges, $205,788, against income of $196,218 in previous twelve months.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, August 14, 1935.

BLANC FIXE.—Demand for blanc fixe is moderately active. Prices are holding to previously quoted levels. The pulp is quoted at from $42.50 to $45 per ton, in bulk; while the powder is selling at from 3½ to 3¾ cents per pound, in barrels, at works.

BLEACHING POWDER.—The position of the bleaching powder market is practically unchanged. Shipments against contract are moving slowly. Prices generally remain steady. Bleaching powder is quoted at from $1.90 to $2.15 per 100 pounds, in drums, at works.

CASEIN.—The casein market is dull. Domestic standard ground is quoted at 10½ and finely ground at 11; French standard ground at 12¾ and finely ground at 13¼; Argentine standard ground at 13 and finely ground at 13½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Some improvement transpired in the caustic soda market. The contract movement is well up to average. Solid caustic soda is quoted at from $2.60 to $3.10; while the flake and ground are selling at from $3 to $3.05 per 100 pounds, in drums, at works.

CHINA CLAY.—The china clay market is marking time. Contract shipments are moving in fairly good volume. Imported china clay is still quoted at from $13.50 to $21 per ton, ship side; while domestic paper making clay is selling at from $6.50 to $12 per ton, at mine.

CHLORINE.—Paper mill demand for chlorine is fairly persistent. The contract movement is heavy for the time of year. Prices are firm. Chlorine is quoted at from $2 to $2.40 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market is inclined to fluctuate. Paper making gum rosin is quoted at $3.90 and wood rosin at $4.05 per 280 pounds, gross weight, in barrels, at Savannah. Seventy per cent rosin size is selling at $2.42 per 100 pounds, in tank cars, at works.

SALT CAKE.—Although demand is light at present the salt cake market continues steady to firm. Salt cake is quoted at from $12 to $13, and chrome salt cake at from $11 to $12 per ton, at works. Imported salt cake is selling at from $12 to $13 per ton, on dock.

SODA ASH.—The soda ash market is displaying strength. Demand is fairly brisk and the contract movement is normal. Prices are firm. Quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bulk, $1.05; in bags, $1.20; and in barrels, $1.50.

STARCH.—Steadiness prevails in the starch market. Paper mill demand is fairly persistent for the time of year. Special paper making starch is still quoted at $3.59 per 100 pounds, in bags; and at $3.86 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—The sulphate of alumina market is exhibiting a fairly strong undertone. Prices are firm. Commercial grades are quoted at from $1.35 to $1.50; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market is steady. Sulphur is quoted at $18 per long ton on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and near by car loads, the quotations is $21 per ton.

TALC.—Trading in the talc market is moderately active. Prices are maintained at formerly quoted levels. Domestic talc is quoted at from $16 to $18 per ton, at eastern mines; while imported talc is selling at from $23 to $30 per ton, on dock.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@	—
Bonds	6.00	@	—
Index	6.00	@	—
Writings—			
Extra Superfine	6.50	@	—
Superfine	6.25	@	—
Tub sized	5.75	@	—
Engine sized	5.50	@	—
Book, Cased—			
S. & S. C.	5.35	@	5.75
S. & S. C. Litho.	5.60	@	6.00
M. F.	5.10	@	5.50
Coated and Enamel	5.90	@	6.55
Coated Litho	5.90	@	6.55
Tissues—Per Ream—			
White No. 1	.82½	@	.85
White No. 2	.67½	@	—
Anti-Tarnish M. G. only	1.00	@	—
Colored	.85	@	—
Kraft	.70	@	—
Manila	.67½	@	.70
Manila—			
No. 1 Jute	9.00	@	9.25
No. 2 Jute	7.75	@	8.50
No. 1 Wood	4.00	@	5.25
No. 2 Wood	3.50	@	4.00
Butchers	4.00	@	4.50
Fibre Papers—			
No. 1 Fibre	4.25	@	5.50
No. 2 Fibre	4.00	@	4.75
Common Bogus	1.50	@	3.00
Screenings	2.50	@	3.50
Glassine—			
Bleached	.11	@	—
Unbleached	.09	@	—

(The following Quotations are Delivered New York)

News, per ton—			
Roll, contract	40.00	@	—
Rolls, spot	40.00	@	—
Sheets	45.00	@	—
Kraft—			
No. 1 Northern	4.12½	@	4.75
Standard	4.00	@	—
Southern	3.87½	@	—
Boards—per ton—			
News	32.50	@	35.00
Chip	32.50	@	35.00
Sgl. Mla. Ll. Chip	45.00	@	47.50
Jute Lined Chip	45.00	@	47.50
White Patent Coated	55.00	@	57.50
Binders Boards	67.00	@	75.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—			
Moist	21.00	@	22.00
Dry	21.00	@	22.00

(F. o. b. Mill)

No. 1 Domestic and Canadian	18.00	@	24.00

Chemical Pulp

(On Dock, Atlantic, Gulf and West Coast Ports)

Bleached Sulphite (Domestic and Foreign)—			
Division 1	2.60	@	—*
Division 2	2.55	@	—*
Division 3	2.50	@	—*
Prime Qualities—			
Class 1. All Prime Easy Bleaching	2.05	@	—*
Other Than Easy Bleaching—			
Class 2. Higher than Standard	2.00	@	—*
Class 3, Standard	1.95	@	—*
Class 4, Lower than Standard	1.90	@	—*

(On Dock, Atlantic Ports)

Kraft No. 1	1.70	@	1.80
Kraft No. 2	1.50	@	1.60

(F. o. b. Pulp Mill)

Kraft Domestic	1.70	@	2.35

(Delivered)

Soda Bleached	2.50	@	—

*Add 60 Cents per short ton, dock charges, for Albany; $2.00 for Lake Ports East and $3.00 for Lake Ports West of Mackinac Straits.

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1	5.75	@	6.00
Silesias No. 1	4.00	@	4.25
New Unbleached	6.25	@	6.50
New Soft Blacks	3.00	@	3.25
Blue Overall	3.50	@	3.75
Fancy	2.50	@	2.75
Washables	1.75	@	2.00
Mixed Khaki Cuttings	3.00	@	3.25
O. D. Khaki Cuttings	3.75	@	4.00
Men's Corduroy	1.50	@	1.75
New Mixed Blacks	2.50	@	2.75

Old Rags

White, No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.75	@	3.25
White, No. 2—			
Repacked	1.75	@	2.25
Miscellaneous	1.50	@	1.75
Thirds and Blues—			
Repacked	1.50	@	1.75
Miscellaneous	1.25	@	1.50
Black Stockings	2.50	@	3.00
Roofing Rags—			
No. 1	1.55	@	1.60
No. 2	1.25	@	1.30
No. 3	.95	@	1.00
No. 4	.95	@	1.00
No. 5A	.80	@	.85

Foreign Rags

New Rags

New Dark Cuttings	1.75	@	1.85
New Mixed Cuttings	1.80	@	1.90
New Light Silesias	3.75	@	4.00
Light Flannelettes	3.75	@	4.00
Unbleached Cuttings	6.50	@	6.75
New White Cuttings	6.50	@	6.75
New Light Oxfords	3.25	@	3.50
New Light Prints	2.75	@	3.00

Old Rags

No. 1 White Linens	7.50	@	8.00
No. 2 White Linens	6.50	@	7.00
No. 3 White Linens	4.50	@	5.00
No. 4 White Linens	2.25	@	2.50
No. 1 White Cotton	4.25	@	4.75
No. 2 White Cotton	3.25	@	3.75
No. 3 White Cotton	2.50	@	2.75
No. 4 White Cotton	1.90	@	2.15
Extra Light Prints	2.00	@	2.25
Ord. Light Prints	1.75	@	1.85
Med. Light Prints	1.55	@	1.65
Dutch Blue Cottons	1.75	@	1.85
French Blue Linens	2.30	@	2.40
German Blue Linens	2.15	@	2.25
German Blue Cottons	1.70	@	1.80
Checks and Blues	1.30	@	1.40
Linsey Garments	1.80	@	1.90
Dark Cottons	1.50	@	1.60
Old Shopperies	1.00	@	1.05
New Shopperies	.95	@	1.05
French Blues	1.70	@	1.80

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—			
Foreign	1.60	@	1.70
Domestic	1.45	@	1.55
Wool Tares, light	1.65	@	1.70
Wool Tares, heavy	1.75	@	1.80
Bright Bagging	1.65	@	1.70
Manila Rope—			
Foreign	1.85	@	2.00
Domestic	1.75	@	2.00
Small Mixed Rope	1.10	@	1.35
New Burlap Cut	2.00	@	2.25
Hessian Jute Threads—			
Foreign	2.60	@	2.75
Domestic	2.80	@	3.00

Old Waste Papers

(F. o. b. New York)

Shavings—			
White Envelope Cuttings	2.45	@	2.55
Ordinary Hard White No. 1	2.10	@	2.15
Hard White No. 2	1.90	@	2.00
Soft White No. 1	1.70	@	1.80
Flat Stock—			
Stitchless	.65	@	.75
Over issue Mag	.65	@	.75
Solid Flat Book	.45	@	.50
Crumpled No. 1	.35	@	.40
Solid Book Ledger	1.50	@	1.65
Ledger Stock	1.00	@	1.10
New B. B. Chips	.30	@	.35
Manilas—			
New Env. Cut	1.70	@	1.80
New Cuttings	1.35	@	1.45
Print	Nominal		
Bogus Wrapper	.40	@	.50
Container	Nominal		
Old Kraft Machine—			
Compressed bales	1.10	@	1.20
News—			
No. 1 White News	1.20	@	1.30
Strictly Overissue	.60	@	.65
Strictly Folded	.30	@	.32½
No. 1 Mixed Paper	.25	@	.27½

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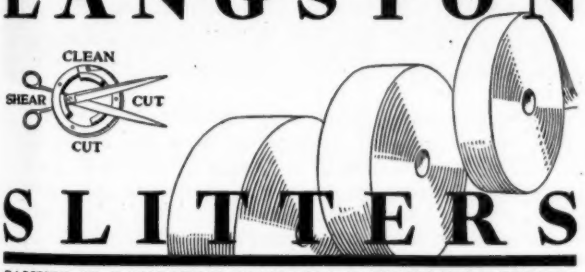

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Sulphur

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Ample Reserves
Prompt Deliveries
Purity 99½%

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75 E. 45th Street New York City

Mines: Gulf, Newgulf and Long Point, Texas

Twines
(F. o. b. Mill)

Coarse Polished—			
India	.11¼	@	.13¾
Belg. White Hemp	.12¼	@	.15¾
India Compress	.11¾	@	.12¾
Fine Polished—			
Fine India	.19	@	.21
Special	.17	@	.19
B. C.	.25½	@	.27½
Unpolished—			
Box	.10	@	.10½
Paper Makers	.07	@	.12
Tube Rope	.08	@	.13½
Wall Paper	.09	@	.12½
Wrapping	.13	@	.18
Special	.13	@	—
Soft Fiber Rope	.10¼	@	.10¾

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.12	@	.50
Water Marked Sulphite Bond	.06¾	@	.11
Sulphite Bond	.05½	@	.11
Superfine Writing	.18	@	.24
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06½
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S &S.C. Book	.05¾	@	.06½
Coated Book	.07	@	.12
Coated Label	.07	@	.08½
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.03¼	@	.03¾
No. 1 Kraft	4.75	@	5.00
Southern Kraft	3.88	@	4.25
No. 2 Kraft	3.88	@	4.25
Wood Tag Boards	.04¼	@	.06½
Sulphite Screenings	.03	@	.03¼
Manila Tissue	.05¾	@	.07
White Tissue	.07	@	.09

(Delivered Central Territory)

News, per ton—			
Rolls, contract	41.00	@	—
Sheets, open	46.00	@	48.50
Boards, per ton—			
Plain Chip	46.50	@	—
Solid News	50.00	@	—
Manila Lined Chip	55.00	@	—
Patent Coated	65.00	@	—
Container Lined—			
85 Test, per 1000 sq. ft.			1.70
100 Test, per 1000 sq. ft.			1.85

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope Cuttings	1.70	@	2.00
No. 1 Hard White	1.40	@	1.65
No. 1 Soft White	1.25	@	1.50
Ledger & Writings	.70	@	.80
Solid Books	.60	@	.70
Blanks	1.00	@	1.05
Krafts	.80	@	.90
New Kraft Cuts	1.20	@	1.30
Manila Env. Cuts	1.25	@	1.30
Ex. No. 1 Manila	.90	@	1.00
Print Manila	.40	@	.50
Overissue News	.40	@	.45
Old Newspapers—			
No. 1	.30	@	.35
No. 1 Mixed Paper	.25	@	.30
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(Delivered Philadelphia)

Bonds	.05-9/10	@	.38
Ledgers	.06-9/10	@	.40
Writings—			
Fine No. 3	.05	@	.06
Superfine	.10	@	.12
Extra Fine	.15	@	.26
Fine	.15	@	.26
Fine, No. 2	.10	@	.25
Book, M. F.	.05¼	@	.06½
Book, S. S. & C.	.05½	@	.07½
Book, Coated	.06½	@	.09
Coated Lithograph	.06¾	@	.08½
Label	.07	@	.11
No. 1 Jute Manila	6.25	@	—
Manila Sul., No. 1	5.25	@	—
Manila No. 2	3.75	@	—
No. 1 Kraft	5.00	@	—
Southern Kraft	4.75	@	—
Common Bogus	.03	@	—
News Print Rolls	40.00	@	—
Straw Board	40.00	@	45.00
News Board	40.00	@	—
Chip Board	37.50	@	—
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	80.00
No. 2, per ton	70.00	@	75.00
Carload lots	65.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1.40	@	1.75
Best Tarred, 3 ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1.	.03½	@	.04
New White, No. 2.	.02½	@	.04
Light Silesias	.02½	@	.03
Silesias, No. 1	.03	@	.03½
Black Silesias, soft.	.02½	@	.03
New Unbleached	.05	@	.05½
Washable, No. 1	.01½	@	.02
Blue Overall	.03½	@	.04
Cottons—According to grades—			
Washable, No. 2	.02½	@	.03
New Blue	.01½	@	.03
Fancy	.01½	@	.03
New Black Soft	.02	@	.04
New Light Seconds	.01½	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O. D.	.03	@	.04
No. 2 Mixed	.03	@	.04
Corduroy	.02	@	.03
New Canvas	.03½	@	.04½
New Black Mixed.	.02½	@	.03½

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.50
Miscellaneous	1.75	@	2.25
M. G.	3.00	@	3.75
Thirds and Blues—			
Miscellaneous	1.00	@	1.50
Repacked	1.50	@	2.00
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.85

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.50
Domestic	1.50	@	1.75
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.50
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	2.25	@	2.30
No. 2 Hard White	1.90	@	2.00
No. 1 Soft White	1.80	@	1.85
No. 2 Soft White	1.25	@	1.30
No. 1 Mixed	—	@	.75
Solid Ledger Stock	1.50	@	1.60
Writing Paper	1.00	@	1.10
No. 1 Books, heavy	.55	@	.60
No. 1 New Manila	1.35	@	1.40
Print Manila	.50	@	.60
Container Manila	.45	@	.50
Old Kraft	1.00	@	—
No. 1 Mixed Paper	.23	@	.25½
Straw Board Chip	.20	@	—
Binders Board Chip	.20	@	—
Corrugated Board	.40	@	—
Overissue News	.50	@	—
Old Newspapers	.30	@	—

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.06	@	.12½
Rag Content	.12	@	.30
All Rag	.36	@	.52½
Bonds—			
Sulphite	.07¼	@	.11
Rag Content	.12	@	.30
All Rag	.36	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.04¾	@	.05
No. 2 Kraft	.04½	@	.04¾
(F. o. b. Boston)			
Southern Kraft	.03¾	@	.04¼
(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots)			
Common Bogus	.02	@	.02¼
(Delivered New England points)			
News Print Rolls	39.50	@	—
Straw Board, rolls	.009	—	@35.00
Straw Board in Sheets, basis 35s to 70s	—		@40.00
Filled News Board	40.00		@45.00
Chip Board	37.50		@40.00
Chip Board (Creasing)	37.50		@40.00
Single Manila Lined Chip	47.50		@52.50
Single White, Patent Coated News Board (Bender)	55.00		@65.00
Wood Pulp Board	70.00		@75.00
Binder Boards (Standard Grade)	67.00		@75.00

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.00	@	2.20
No. 1 Soft White	1.75	@	1.90
No. 2 Mixed	.75	@	.80
Solid Ledger Books	1.40	@	1.50
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.85	@	.90
No. 1 Books, heavy	.55	@	.65
No. 1 Books, light	.50	@	.60
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.30	@	1.40
No. 1 Old Manila	.60	@	.65
White Blank News	1.15	@	1.20
No. 1 Kraft	1.00	@	1.10
Mixed Papers	.22½	@	.25
Print Manila	.40	@	.45
Container Manilas	.27½	@	—
Overissue News	—	@	.35
Old Newspapers	.25	@	.27½
Box Board Chips	—	@	.25
Corrugated Boxes	.45	@	—
Screening Wrappers	.40	@	.45

Bagging
(F. o. b. Boston)

Manila Rope—			
Foreign	1.80	@	1.90
Domestic	1.50	@	1.75
Transmission Rope	.90	@	1.00
Jute Rope	1.50	@	1.60
Jute Carpet Threads	.65	@	.70
Gunny No. 1—			
Foreign	1.85	@	—
Domestic	1.35	@	—
Bleachery Burlap	4.00	@	4.50
Scrap Burlap—			
Foreign	1.75	@	1.85
Domestic	1.60	@	—
Scrap Sisal	1.05	@	1.15
Scrap Sisal for Shredding	1.20	@	1.35
Wool Tares, heavy	1.60	@	1.70
New Burlap Cuttings	1.60	@	1.75
Australian Wool Pouches	2.50	@	2.75
Heavy Baling Bagging	1.50	@	1.60
Paper Mill Bagging	1.10	@	1.25
Bagging No. 2	.70	@	.75

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.01¾	@	.02
New White No. 1	.05½	@	.06
New White No. 2	.03½	@	.04
Silesias No. 1	.04¼	@	.04½
New Black Silesias	.02½	@	.03
Soft Unbleached	.05⅞	@	.06¼
Blue Cheviot	—	@	4.65
Fancy	.0195	@	.021
Washable	.0165	@	.0170
Cottons—According to grades—			
Blue Overalls	.04	@	—
New Black, soft	.04	@	.04¼
Khaki Cuttings	.03½	@	.03¾
O. D. Khaki	.03	@	.03¼
Corduroy	.01¾	@	.02
New Canvas	—	@	.05
B.V.D. Cuttings	—	@	.06¼
Paper Mill Bagging	1.10	@	1.25

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	—	@	2.75
Miscellaneous	2.50	@	2.75
White No. 2—			
Repacked	1.90	@	2.00
Miscellaneous	2.00	@	2.25
Twos and Blues	1.25	@	1.50
Thirds and Blues—			
Repacked	2.00	@	2.75
Miscellaneous	2.00	@	2.25
Black Stockings	2.50	@	3.00
Roofing Stock—			
No. 1	1.30	@	1.35
No. 2	1.00	@	1.05
No. 3	.95	@	1.00

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.50	@	1.55
New White Shirt Cuttings	5.50	@	6.00
Dutch Blues	2.00	@	2.50
New Checks & Blues	2.50	@	3.00
Old Fustians	1.75	@	—
Old Linsey Garments	1.90	@	—

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.11	@	—
No. 2 Sulphite	.08½	@	—
No. 1 Colored	.12	@	—
No. 2 Colored	.09	@	—
Ledgers (sulphite)—			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.50	@	—
No. 2 M. F. (Carloads)	6.00	@	—
No. 3 M. F. (Carloads)	5.50	@	—
No. 1 S. C. (Carloads)	7.00	@	—
No. 2 S. C. (Carloads)	6.50	@	—
No. 3 S. C. (Carloads)	5.20	@	—
No. 1 Coated and Litho	12.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	13.00	@	—
Wrapping—delivered—			
Rag Brown	4.75	@	—
White Wrap	3.50	@	—
"B" Manila	5.25	@	—
No. 1 Manila	5.40	@	—
Fiber	5.40	@	—
Kraft, M. F.	5.90	@	—
Kraft, No. 2	5.40	@	—

(F. o. b. Cars Toronto)

News, per ton—			
Rolls (contract)	39.50	@	—
Sheets	44.50	@	—

Pulp

Ground wood	27.00	@	—
Unbleached Sulphite	42.00	@	—
Book (Class 1)	58.00	@	—
Writing (Class 2)	59.00	@	—
Select (Class 3)	60.00	@	—

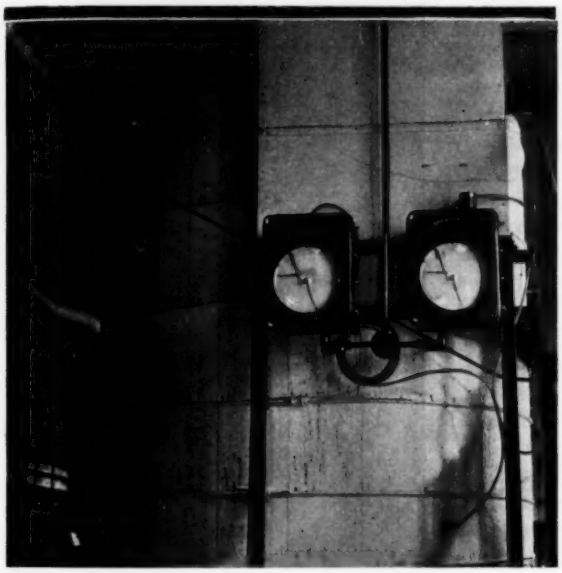
Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	2.00	@	2.30
Soft White	1.60	@	1.90
White Blk. News	1.25	@	1.40
Book and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	1.00
Light and Crumpled Book Stock	.80	@	.90
Ledgers and Writings	1.00	@	1.05
Manilas—			
New Manila Cut	1.25	@	1.40
Printed Manilas	.50	@	.60
Kraft	1.00	@	1.60
News and Scrap—			
Strictly Overissue	.60	@	—
Strictly Folded	.50	@	—
No. 1 Mixed Paper	.40	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.06	@	—
Fancy Shirt Cuttings	.02	@	—

Controlling
SIZE TEMPERATURES
IMPROVES PROCESSING



INSTALLED on the size tanks in the mill of the Everett Pulp & Paper Co., Everett, Wash., these two Bristol's Recorder Controllers maintain the sizing solution at a constant temperature. By eliminating critical fluctuation, they make possible a substantial saving in steam, improve processing, and contribute to uniformity in product quality. Bristol's Recorders and Controllers offer comparable economies in regulating the intensity of beating and the duration of each beating cycle, in preventing both cold and hot grinding, in registering temperature and pressure of the sulphite liquid, preparing digester cooking acid and on other important mill operations.

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PIONEERS IN PROCESS CONTROL SINCE 1889

PAPER TRADE JOURNAL
ESTABLISHED 1872

SIXTY-FOURTH YEAR
THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

Published Every Thursday by the
LOCKWOOD TRADE JOURNAL CO., Inc.

GEO. S. MACDONALD, President. J. BANNINGA, Sec.-Treas.

Published at 34 No. Crystal St., East Stroudsburg, Pa.
Executive and Editorial Offices: 15 West 47th Street, New York
Chicago Office: 123 West Madison St.

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